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EXAMINER.

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To our Readers and Correspondents.

Beginning with Vol. XXXVII., July, 1878, the CHICAGO MEDICAL JOURNAL AND EXAMINER prints all records of length and weight in terms of the Metric System, and all records of temperature in degrees of the Centigrade Scale. The Metric System, legalized in the United States and Great Britain, is extensively or exclusively employed by other civilized nations, and has thus become an essential part of the international language of science. It is recommended for adoption to the profession in this country by the American Medical Association and other scientific bodies. To-day no physician can afford to be ignorant of its value, its simplicity and the meaning of its terms.

The subjoined tables and scales, which have been kindly prepared for us by Prof. W. S. Haines, will be continuously reproduced in subsequent numbers of this journal, for the ready reference of our readers and correspondents.

Metric Measures of Length.

Millimeter	0.001 of a Meter	0.03937	inches.
Centimeter	0.01 " "	0.39370	"
Decimeter	0.1 " "	3.93707	"
Meter	**1.**	**Meter**	**39.37079** "
Decameter	10.	Meters	393.70790 "
Hectometer	100.	"	3937.07900 "
Kilometer	1000.	"	39370.79000 "

Metrical Weights.

Milligram	0.001 of a Gram	0.015	grains.
Centigram	0.01 " "	0.154	"
Decigram	0.1 " "	1.543	"
Gram	**1.**	**Gram**	**15.432** "
Decagram	10.	Grams	154.323 "
Hectogram	100.	"	1543.234 "
Kilogram	1000.	"	15434.348 "

☞ The United States "nickel" five cent piece weighs five grams, and is two centimeters in diameter.

Approximate Equivalent of Metrical Weights.

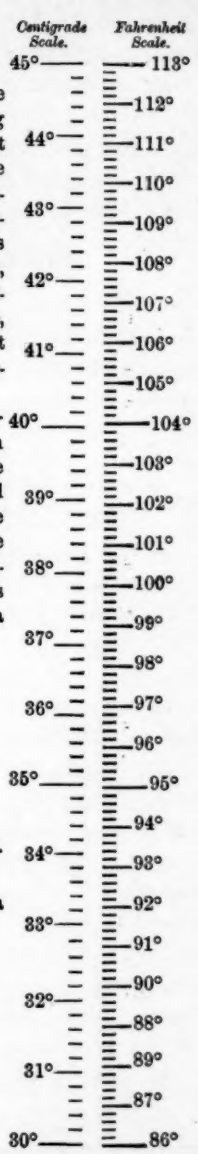
For Rapid Reference.

Milligrams.	*Grains.*	*Decigrams.*	*Grains.*
1 (written 0.001 or |001)*	1/65	1 (written 0.1 or |1)	1 1/2
2	1/32	2	3
3	1/22	3	4 1/2
4	1/16	4	6
5	1/13	5	7 1/2
6	1/11	6	9
7	1/9	7	11
8	1/8	8	12 1/2
9	1/7	9	14

Centigrams.	*Grains.*	*Grams.*	*Grains.*
1 (written 0.01 or |01)	1/6	1 (written 1. or 1|)	15
2	1/3	2	30
3	6/13	3	46
4	7/11	4	61
5	3/4	5	77
6	9/10	6	92
7	1	7	108
8	1 1/4	8	123
9	1 1/2	9	139

A Kilogram—2 1/5 lbs. Avoirdupois.

* The decimal *line* instead of points makes errors impossible.



Metric Fluid Measures.

When using the metric system, fluids are preferably prescribed by weight, employing the gram, its multiples and subdivisions, just the same as with solids, thus avoiding the errors due to refraction, adhesion, and inaccurate measuring vessels. For practical purposes four grams of water may be regarded as equivalent to a fluid drachm of that liquid, and the same may be considered true of tinctures and infusions; syrups, on the average, are about one-third heavier than water, so that a fluid ounce of a syrup will be approximately represented by 43 grams.

If preferred, however, fluids may be prescribed by volume, in the metric, just as in the present system, using for that purpose the *Cubic Centimeter*, that is, a volume represented by a cube all of whose sides measure one centimeter. An ordinary back-gammon die is usually about this size. One cubic centimeter (written 1 C. C.) = 16.231 minims. It is approximately regarded as one fourth of a fluid drachm.

Approximate Equivalents of Cubic Centimeter.

0.001	C. C.	=	1/60 minim.
0.01	"	=	1/6 "
0.1	"	=	1½ "
1.	**C. C.**	**= .....**	**15 minim.**
4.	"	=	1 fluid drachm.
16.	"	=	4 fluid drachms.
32.	"	=	1 ounce.

1000 C. C. (usually known as a **Liter**) is a trifle more than one quart, wine measure.

The following prescription—

℞: Potassii bromidi, ℥i.
Elixir aurantii, fl., ℥viij.
M.

Would, in metric terms, be written:

Potassic bromide, 32
Orange elixir, 250
Mix.

Original Communications.

A CONSPECTUS OF THE DIFFERENT FORMS OF CONSUMPTION, INTENDED AS AN AID TO DIFFERENTIAL DIAGNOSIS.

By Roswell Park, A. M., M. D.,

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(Based upon the labors of Niemeyer, Wagner, Rindfleisch, Ruehle and Virchow.)

The writer assumes that no apology is needed for any article calculated to throw any light upon the early recognition or differential diagnosis of the different forms of that dread malady—consumption. In the following contribution his sole endeavor has been to be *practical.* It would be impossible to present a complete picture of the disease within the limits allowed; much that is omitted must, therefore, be excused on that ground. The determination as to whether a case of phthisis before us is in a tuberculous condition; even further than this—to diagnose exactly the condition it may be in, is, as every one will recognize, of vast importance, especially as bearing on our prognosis and treatment.* That many advances have of late been made in this direction, we have reason to congratulate ourselves. Altogether too much carelessness exists in confounding the words "consumption" and "tuberculosis," "consolidation" and "deposit of tubercle," their indiscriminate use betraying some uncertainty in the minds of those who thus employ them.

So-called consumption, when advanced, can usually be diag-

* For an excellent summary of the benefits of change of climate in the different forms of phthisis, with advice as to choice of localities, see the address of Prof. Loomis before Section I. of the American Medical Association during its recent meeting at Buffalo; reported in the July number of this journal.

nosed by the merest tyro, but to recognize it in its formative stage, to differentiate it from other pulmonary complaints, to discern the tubercular element, are often matters requiring most careful scrutiny.

That patients live and die with phthisis without the formation of a particle of tubercle is an established fact; that others develop tubercle in the course of the complaint, and that in yet others the tuberculous process is the initiative step, are equally true.

Any assistance, therefore, to the separation and identification of each class of cases, is of practical importance. As a contribution in this direction, the writer submits the subjoined tabular views, hoping that they may prove as useful to others as they have been to himself.

But there are many points in the general appearance of a patient with incipient phthisis which may be regarded as aiding in the diagnosis or showing a condition of system favorable to its development. At the risk of being prolix, the writer desires to mention the following: slender bones, thin skin, delicate hue of cheeks, large eyes, bluish sclerotic, long eyelids, pale face which blushes readily, little subcutaneous fat, thin, slender hands with incurvated nails (the clubbed fingers are not distinctive of phthisis as many suppose; they are noticed in several chronic complaints), sharply defined red line at the edge of the gums opposite the canines and incisors; poorly-shaped muscles—especially those of the neck which allow the thorax to sink and thus cause the neck to appear long, small antero-posterior diameter of thorax, wide interspaces, acute angle of junction of ribs to sternum—causing the chest to seem long, flat and narrow, shoulders tipped forward and inner angles of scapulæ tipped up like wings; abdominal character of respiration, spots of pityriasis (tinea) versicolor or lentigo hepatica on back and chest; rise of temperature (38.5 C.) with flushed cheeks and hot hands *at evening*, gradual emaciation, wandering pains in chest and shoulders, etc.

Among the physical signs may be mentioned—special excitability of the heart in anæmic persons, continuous acceleration of the pulse without evidence (except by the thermometer) of increased temperature, systolic murmur in the subclavian, becoming louder

or heard only during expiration (a sign of adhesion of pleural surfaces at apices). The pulse is not only rapid, but soft and empty, and even when there is fever it has not the usual sthenic characteristics. Enlargement of glands may cause venous compression with dilatation of veins of neck and face, or even cyanosis. Depression of supra and infra-clavicular spaces does not always *of itself* indicate any variety of phthisis; it is due to induration or shrinking of the apex of the lung (from pneumonic-cirrhotic—processes) and may predispose. But when it appears by itself without other signs to indicate phthisis, it more often indicates a partial cure of the nutritive changes which of themselves predispose to that disease. A feebleness of respiration in the same locality and with similar accompaniments is of similar import. So also is a wide extension of cardiac shock and dislocation outward of apex beat. These latter signs, therefore, are by no means pathognomonic of phthisis unless accompanied by other signs, as above.

Caution is required if one would not be misled by too great reliance on physical signs. Puerile respiration and increased vocal resonance in right infra-clavicular and supra-spinous regions, often alluded to as signs of incipient phthisis, are met with in healthy lungs, and should not be regarded as suspicious sounds unless accompanied as above. So, too, with regard to fever; a fever which has no obvious cause, and which persists, points to phthisis; if there be absence of fever and suspicious physical signs, even though there be emaciation and cough (often caused by tracheal catarrh or chronic tonsilitis), the fear of phthisis may be dismissed.

Anæmia, combined with dyspepsia and hysteria, may simulate phthisis; here the thermometer should decide. Chronic bronchial catarrh may cause needless alarm; but this need not be unless it shall have attacked the apices; its usual manifestations are confined to the lower lobes, and as improvement occurs it takes place from above downward.

Phthisis may be strongly suspected when a patient with a cough has or has had an uncontrollable diarrhœa, or non-specific aphonia or when fever is present without other cause.

Without going at all deeply into the consideration of the æti-

ology of consumption, certain factors in which are mentioned in the tabular statements, a few either of the more prominent points, or of those too often overlooked, will bear mention in this connection; consideration of these points not infrequently influencing our diagnosis.

A sudden chilling of the stomach or of the skin may be sufficient to set up catarrhal or pneumonic processes whose termination we cannot forsee. Children fed on pap instead of being nourished at the breast, are more apt to react poorly against such disease. Diseases such as syphilis, typhoid, diabetes, chlorosis, etc, predispose, inasmuch as they cause malassimilation. Puny, badly nourished subjects, are more susceptible, because among such, inflammatory nutritive disorders show greater tendency to cell formation and subsequent caseous degeneration. Great alterations of temperature and a high degree of moisture each predispose, as do previous and frequent catarrhs.

Lack of expansibility of chest apices owing to change in the cartilages of the first ribs, congenital or occurring in early youth (e. g. ossification or shortening), faulty carriage of body, diminished respiratory capacity, due to feebleness of respiratory muscles, are all prominent factors. Bronchial catarrh and usually associated disease of the bronchial glands attending measles, especially when epidemic, and the frequent general glandular troubles also attending it, make it a frequent cause. The connection between phthisis and pertussis is, for the same reason, equally manifest. That between phthisis and the later stage of diabetes mellitus is more obscure.

Hæmorrhage, as such, does not predispose except as its resulting clots fail to be resolved and absorbed; clots or fragments of clots remaining may be regarded with considerable concern.

There is no evidence that the milk of consumptives can excite the disease.

On the other hand, malaria and valvular heart disease are said to confer some immunity. While the phthisical lung is the more vascular, emphysematous lungs are more dry and bloodless and rarely inflame; but when once inflamed they degenerate rapidly.

With regard to the cough, almost always a distressing feature, it may be regarded as the expression of (*a.*) the extent of impli-

cation of the bronchial mucous membrane; (*b.*) the extent of implication of the lymphatic (bronchial) glands; (*c.*) nervous reflex excitability; (*d.*) the proximity of the lesion to the larynx.

Table I. gives, side by side, the features of the three different forms of inflammatory phthisis uncomplicated by tubercle; the site of the primary lesions being respectively in the *interstitial connective tissue*, the *acini* or *alveoli* and the *bronchioles*. The second class of cases can usually be more easily differentiated from the first than from the third; while in many cases there are such a variety of pathological processes taking place consentaneously that it may be impossible to assign the patient a place in any one class.

But that cases are frequently met with where this classification can be made, I trust no one will deny. It is taken for granted that the tubercular element has been excluded (though perhaps this is not essential); this is done chiefly by aid of the thermometer (vide Table II.) This table is founded principally upon the monograph of Ruehle. (Ziemssen's Cyclop).

Table I.

Uncomplicated Inflammatory Phthisis.

Simple Chronic Apicial Pneumonia.	Lobular Disease Characterized by Foci:—Broncho Pneumonia.	Apicial Catarrh.
Changes consist of simple, chronic, indurative inflammation.	Changes consist of formation of clusters of nodular foci which excite inflammation in surrounding parts and coalesce with the inflammatory products thus formed. The whole mass then becomes caseous, and breaking down forms ulcers, and so the destructive processes advance; or they may be arrested by the recurrence of simple inflammation with resulting induration.	Beginning in the bronchi, producing inflammatory infiltration and swelling of the entire thickness of their walls, with caseation and dilatation. Degeneration then takes place, pneumonic processes are set up by extension into the parenchyma, and the inflammatory products either necrose or undergo induration resulting in limitation and cure.
The most important physical sign is dullness in the supra, and infra-clavicular and supra, and infra-spinous fossæ. The more intense and extended this dullness, the greater the probability that this is the form of the disease.	Slight dulness, with sunken supra-clavicular fossæ; apices of lungs lowered. (Best ascertained by percussion in front, with patient's mouth open.)	First shades of dulness develop very gradually in apices, and sometimes a little further down.
Later the altered shape of affected side and impeded respiration show that shrinking has supervened. This sinking above and below the clavicle and the flattening of the whole upper part of the thorax indicate chronic pneumonia.	Narrowed chest, with imperfect and unequal expansion.	
	Signs of infiltration predominate over those of bronchitis.	Signs of bronchitis predominate over those of infiltration.

Respiratory murmur changes gradually from a puerile respiration to a loud, harsh, bronchial sound, heard both during inspiration and expiration.	Expiratory sound is usually bronchial; and in many cases the inspiratory sound has an uninterrupted, vesicular character for an appreciable time before the sound becomes bronchial.	
Crepitant râles may be heard at times; if present, they are rather sibilant in character. If any catarrh be present, these may be abundant.	Crackling râles are scanty at the outset; but when softening takes place, they are abundant, and mixed with a sibilant, bubbling sound.	Non-sibilant crackling râles are heard from the outset, at least on deep inspiration and coughing. Later the râles may become sibilant.
The local signs extend very slowly, or as gradually become confined and fixed.	Course more rapid.	Same.
If bronchiectases are produced by the cirrhosis and retraction of the connective tissue, signs of cavities of corresponding size will be found.	As the disease advances (*vid. supra*) auscultatory and other signs of cavities are discerned; *e. g.*, tympanitic and "cracked-pot" resonance.	Same.
Cough is usually of moderate severity, or may be absent.	Dry cough from the outset, with scanty expectoration.	Cough, with moderate expectoration, one of the first symptoms.
Expectoration scanty; but in case there be inter-current bronchial catarrh, it is more abundant, catarrhal in character and muco-purulent.	When expectoration is a feature, the sputa are gelatinous, of reddish tint, and contain elastic fibers early in the disease.	Expectoration accompanies the cough; sputa frequently contain streaks of blood.
Sputa contain no blood.	Later the sputa are more solid and globular, and contain more or less blood.	Sputa contain also yellowish-white, non-aerated streaks, and much amorphous matter, together with small detached particles which sink in water.
Hæmoptysis rarely or never.	Hæmoptysis may cause the first alarm.	Hæmoptysis not as likely to occur.
Pains—supposed often to be rheumatic—frequently occur on affected side.	More or less pain.	More or less pain.

Usually no complications.	Derangement of appetite and digestion frequent. Functions of larynx and intestines rarely undisturbed.	Laryngeal and intestinal complications make their appearance late.
Fever—at evening—absent or inconsiderable.	Fever—at evening—is present, with night sweats.	Fever inconsiderable until the disease is advanced.
Emaciation—at first only slight—increases very slowly or disappears.	Emaciation one of the earliest and most prominent symptoms; advances *pari passu* with the fever and complication.	Emaciation and loss of strength, with constitutional symptoms, are among the first suspicious signs noticed.
Heredity plays an unimportant part.	Heredity plays an important part, as do rapid growth, poor development, and such diseases as typhoid, morbilli, pertussis, etc.	Heredity plays a conspicuous part, especially in "scrofulous" patients, or those who have frequent attacks of catarrh.
Local irritating causes are a much more important factor.	Local irritating causes are a much less important factor.	Same.

Thus much for the cases of purely inflammatory phthisis. The frequent complication of such cases by the neoplastic element, *tubercle*, makes possible yet another grouping between, on the one hand, those cases included in Table I, and, on the other, certain cases where the appearance of miliary tubercle is, so far as can be determined, the first pulmonary lesion. Between these two strongly contrasted forms occurs one where tubercle is found in products of previous inflammatory change.

Our knowledge of tubercle is yet far from exact, and the dividing line between it and scrofulous and other affections not clearly drawn. But the writer may be allowed to define the position taken in preparing this paper. With regard to scrofula, Ruehle's views seem so just and well-founded, that they are given almost verbatim.

By scrofula is meant—not any particular feebleness or sickliness of body, but rather a tendency to certain forms of disease, e. g., inflammations of mucous membranes and skin, whose products are abnormal in character, and which being carried to the lymphatics excite in them inflammation or hyperplasia. These inflammations are characterized by abundant cell proliferation. According to Rindfleisch, one fundamental characteristic of scrofulous affections is the accompanying disproportion between the volume of the blood and the weight of the body.

Scrofulous, as well as other inflammations lead often to the formation of cheesy masses. Tnese are described by Wagner as being results of inflammation where the purulent or fibrino-purulent exudation, or the desquammated epithelium have, in consequence of anæmia, lost so much liquid that there results a dry, grayish or yellowish mass, firmly imbedded in the tissues. Even tubercle itself, as well as old cancerous nodules, hæmorrhagic infarctions, incapsulated collections of pus, etc., may undergo this change as well as fatty metamorphosis. There is no *yellow tubercle* as formerly spoken of; when such is found, it is the product of the cheesy atrophy just mentioned.

Now these cheesy infiltrations and suppurations of mucous membranes, by some unknown means, elaborate a poison which, when re-absorbed, produces tubercle. The source of tubercular infection is, therefore, thus furnished by the patient himself. (Rindfleisch.)

Probably the best idea or definition of tubercle may be gathered from the description of Wagner, who considers it an infiltrated, multiple, usually miliary, non-vascular neo-plasm, consisting especially of nuclei of varying sizes, indifferent and giant cells—all imbedded in a reticular tissue, and which constantly tends to pass into cheesy atrophy or softening. The basis for its development—the cheesy focus—is most frequent in connective tissue, previously irritated ("scrofulous") glands, bones, testicles, etc. This cheesy focus may be incompletely encapsuled, the capsule being only a relative and considerable but not absolute obstacle to resorption. Tubercle probably originates from (fixed) connective tissue corpuscles, and the endothelium connected therewith; it grows by division of the nuclei and extends along connective tissue, lymphatics and blood-vessels.

Tuberculosis has its analogies to miliary carcinosis; is probably transmissible, like glanders, syphilis, etc., and is not usually found with other infectious diseases.

With regard to the prognosis of cases of consumption thus complicated, resorption of tubercle, accompanied usually by fatty atrophy, takes place very rarely indeed; calcification, softening and liquefaction (ulceration), much more frequently. But there is never a chance that the lung can return to its normal condition. The best that can be hoped for is that the lesions already existing may be rendered innocuous; this happens by shrinkage of the infiltration and formation of blood-vessels which do not penetrate deeply, but supply constant though scanty nourishment. (Rindfleisch, Wagner.) Of course this applies only to cases referred to in the second column of Table II.

These remarks will suffice to explain more fully the following table. If there be any one point in it upon which sufficient stress has not been laid, it is that in reference to the constant use of the thermometer as an aid to diagnosis. The writer deems it possible by its aid, and by the other signs given in the same table, to group four-fifths, at least, of cases of consumption in their proper place; and of those coming under the heading of the first column probably one half can, by the use of Table I, be again classified.

TABLE II.

Non-Tubercular Compared with Tubercular Phthisis.

INFLAMMATORY.	TUBERCULAR.	ACUTE MILIARY TUBERCULOSIS.
Purely and Directly the Result of Inflammatory processes. May be either one or a complication of all the forms mentioned in Table I.	*Adventitious Deposit of Tubercle (Miliary) following Caseous Metamorphosis of Products of Inflammation.* Always secondary to the inflammatory variety.	*Supervention or Formation of Miliary Tubercle during Apparent Good Health.* Much resembles an acute infectious disease.
ÆTIOLOGY, ETC.	ÆTIOLOGY, ETC.	ÆTIOLOGY, ETC.
Exciting causes: anything which produces congestion and bronchial catarrh. (*Vid. supra.*)	A sort of middle ground between the forms on either side. Occurs in connection with pre-existing lesions of the apices. The greatest danger for consumptives is that they may become tuberculous. Incapsulation of caseous masses affords some protection against this.	But one cause is known; the absorption of caseous matter. Most cases present some antecedent lesion of some organ; but often not recognized. Persons predisposed to inflammatory action suffer from acute and primary tuberculosis with greater relative frequency.
Pneumonia, catarrhal or croupous, when it has attacked the apex.	Next after the caseous products of pneumonia in liability to tubercular infection come the exudates of pleurisy and pericarditis; caseous, lymphatic and bronchial glands, etc.	Where measles, etc., or "scrofulous" affections have caused enlarged lymphatics, bronchial glands, etc., or where there are caries of bone, caseous testicle, prostate or bladder, remains of inspissated abscesses, remains of serous inflammations or ulcerations, or the like, there may be said to be cause for development of miliary tubercle. When it assumes the form of an
Croup, cerebral irritation, or moist eruptions, may be followed, after puberty, by bronchial hæmorrhage and inflammatory lung disorder.		

		acute disease, these foci may be considered as having for some time remained non-infective.
Pertussis, morbilli, scarlatina, etc., may lead to this form directly.	Pertussis, morbilli, scarlatina, etc., may lead to this form by producing a "scrofulous" condition and glandular tuberculosis, thus supplying foci for subsequent general infection.	Same.
PATHOLOGY.	PATHOLOGY.	PATHOLOGY.
Is the result of inflammatory processes, and is a chronic disease with intercurrent simple forms of inflammation, which may heal by cicatrization.	Is the result of a neoplasm; is more or less chronic, and is a resorption disease.	Is the result of a neoplasm; is rapidly acute, and is a resorption disease.
Consists in suppuration or caseous degeneration of lobular or lobar infiltration; the extension (with exceptions) of a chronic catarrh and copious secretion of young cells into the bronchioles and finally into the air vessicles.	Follows caseous infiltration or degeneration as a sequel to chronic catarrhal or croupous inflammation, tubercles being deposited in the metamorphosed pneumonic product.	The focus of attraction for the acute production of tubercle in the lungs is usually a pre-existing chronic tuberculosis of those organs; when miliary tubercle forms the only lesion we have to do with the acute infectious disease.
	Is regarded by some as a combination of inflammation and tuberculosis.	There is no chronic miliary tuberculosis in the *old* sense of the word.
	Plays a subordinate rôle, inasmuch as tubercle is an accidental, secondary product.	
	The number, size and distribution of of miliary tubercles do not necessarily	Same.

afford an expression of the constitutional disturbance.

When upon phthsis tubercle supervenes, it usually first develops in the mucous membrane of the bronchi, trachea or larynx. The most frequent site is the point where the bronchiole connects with the acinus. Thence it spreads in all directions.

In the invasion of miliary tuberculosis three stages are often distinguishable: (*a.*) Local scrofulo-tubercular primary infection; (*b.*) tuberculosis of lymphatic glands; (*c.*) general infection.

When the branches of the pulmonary artery become obliterated, the bronchial arteries enlarge and conduct the supply of blood to the lungs. The intercostal arteries also enlarge and advance through the pleuritic exudate; so that the affected lung really receives more blood than the sound one. Part of this blood is discharged into the intercostal veins; this impedes the discharge of the cutaneous veins into the intercostal so that the former enlarge; and hence the blue network of veins often noticed on the chest wall.

Same.

Time is not afforded for these changes.

Cavities are enlarged by the same processes which assisted in their formation.

Cavities rarely enlarge by caseous degeneration of the tubercular infiltration, but by a diphtheritic infiltration with subsequent decay.

Cavities are not formed.

Often accompanied by laryngeal and intestinal diseases, as well as by fatty or amy-

Often combined with laryngeal disease, ulcer of the bowel, intestinal or cerebral

May be complicated by intestinal as well as cerebral or meningeal tubercle.

loid changes in the liver; with the access of the former (fatty change) occurs imperfect assimilation of food and emaciation; with the access of the latter the pulmonary symptoms often seem to recede.

In protracted cases the volume of the blood is diminshed and the heart flabby.

In recent cases the flow of the right heart is impeded, and it is therefore dilated and hypertrophied.

Never appears before first dentition.

MORBID ANATOMY.

The anatomical appearances are so varied and inconstant, and so familiar, that space cannot be afforded to describe them. Suffice it to say, that among all the appearances of infiltration, dilatation, caseation, ulceration and necrosis, *no* tubercles are found.

After death the skin is remarkably white and covered with scales of pityriasis (tinea) tabescentium. Feet and limbs are often

tubercle, and fatty or amyloid liver and kidneys.

Same.

Same.

MORBID ANATOMY.

The tubercle of chronic tuberculosis is never uniformly disseminated; the gray tubercle proper being found along with the yellow caseous masses (the so-called "yellow tubercle") showing the deposit to have gradually taken place. The abdominal viscera are less often covered with tubercles.

Same.

Cases cannot be considered protracted; nevertheless the same change may occur.

May occur in early infancy.

MORBID ANATOMY.

Lungs are congested, œdematous, emphysematous at edges, and present in the vast majority of cases an uniformly studded aspect of miliary tubercles, gray, translucent and fresh. Pleuræ the same. The peritoneum, liver, kidneys and spleen are usually covered with the same. Also, in young subjects, the parts about the base of the brain. The smallest miliary tubercles, being invisible to the unaided eye, are often overlooked in the glands and viscera.

The corpse usually resembles that of one dead from acute febrile disease, decomposing rapidly. The blood is dark and liquid and settles to dependent parts, causing pul-

œdematous, and crural veins plugged with thrombi.		monary hypostases and suggillations The muscles are friable. The spleen soft and enlarged.
A catarrhal ulcer of the intestine should not be mistaken for tubercular.	Many so-called tuberculous ulcers of the intestines are of a lardaceous or catarrhal character.	Intestinal ulcers very rarely form.
	The center of the tubercle usually degenerates first.	Same.
Caseous bronchial glands infrequent.	Caseous bronchial glands frequent.	Same.
		As there has been more or less bronchial or tracheal catarrh during life, evidences thereof are found after death.
SYMPTOMATOLOGY AND SEMEIOLOGY.	SYMPTOMATOLOGY AND SEMEIOLOGY.	SYMPTOMATOLOGY AND SEMEIOLOGY.
Has a period of percussory catarrh, with protracted cough and expectoration, of variable duration; this need not necessarily commence in the alveoli and bronchioles, or connective tissue, but may proceed downward from the trachea.	Is necessarily preceded by some such condition as that just described.	At outset repeated rigors, without complete intermission, with rapid pulse increasing respiratory rate, and severe constitutional disturbance.
Fever and wasting deferred.	Pallor, fever, emaciation and night-sweats usually appear early with cough and expectoration.	Very much resembles typhus.
		Anorexia a notable symptom; mouth often dry, at times very moist.
		Rapidly increasing prostration with aggravated cough and dyspnœa.
		Extremities cool. Slight cyanosis.
		Soon colliquative sweats, pulse more

		rapid, emaciation from day to day, sensorium deranged and semi-coma.
Physical signs are enough to explain other symptoms.	Spleen may be slightly enlarged.	Spleen is usually enlarged.
Well defined, dark yellow streaks in sputa, showing that the catarrh has reached the finer bronchi; a bad sign.	Same.	Are not enough.
		Condition of sputa crude and dependent upon the amount and extent of bronchial catarrh; they possess no characteristic appearances.
Infiltration and caseous degeneration may occur without cough or expectoration. Should intestinal inflammation complicate such cases it may exercise a derivative influence on the bronchi.		
Voice and cough rarely hoarse.	A hoarse or inaudible cough or a distressing laryngitis may occur with the advent of tubercular complication, and are pathognomonic and unfavorable signs.	Cough may be distressing, but hoarseness is rare.
The discovery of elastic fibres in the sputa is a positive sign.	The same holds good here; and when the sputa of a persistent cough, accompanied by fever, for a long time retain the crude character of the mucous sputa of acute bronchitis, suspect development of tubercle, since the existence of tubercle in bronchial mucous membrane is generally attended with distressing cough and scanty sputa.	The cough of this variety may be thus accounted for.

The appearance of blood *in* muco-purulent sputa, whereby they acquire a yellowish-red color, indicates a chronic pneumonia, and shows that catarrh has extended to the air vesicles.

Rounded, nummulated sputa, which sink slowly to the bottom, and do not coalesce, are sure indications of a *cavity*, but not necessarily of tuberculosis.

The hectic is more of a *remittent* or *intermittent* than of a continued type; with a range of, say, 1.1° C. between evening and morning temperature; the evening elevation being a constant feature.

The fever may present all possible variations in the same individual. A sudden accession may be regarded as an indication of some fresh inflammatory process; *e. g.*, pleuritis, pneumonia.

(In children the invasion of the air vesicles by an acute catarrh is accompanied by increased temperature and accelerated pulse.)

With marked evening rise of temperature, the rate of respiration does not correspondingly accelerate; hardly ever more than six or eight breaths per minute.

Patients may run through the whole

The hectic is of a *continued* type: temperature always above normal, but not much higher in the evening than in the morning; *i. e.*, the remissions *not* well marked; moreover it resists treatment.

Same with regard to period of maximum temperature; only the temperature range does not show such sharp curves.

Diarrhœa, especially in those of costive

Temperature is of the *remittent* type; but not infrequently the maximum occurs during the morning. It rarely rises very high at any time, and towards the end the mean temperature may decline.

Pulse becomes smaller, and yet more rapid, while the respiration rate increases; œdema of lungs from insufficient filling of right heart, and finally palsy of bronchi and suffocative effusion; the violence of the fever, malignancy of the disease, dyspnœa and rapid collapse, affording data for differential diagnosis.

Temperature very seldom reaches 40° C., and is out of all proportion to the rapidity of the pulse.

Little or no meteorism or ileo-cæca

course without diarrhœa or evidences of meningeal complication.	habit; signs of implication of meninges, especially in younger subjects; also hoarseness and aphonia.	tenderness. Stools are indefinite in color and consistence.
Profuse sweating, usually at night.	Same; with sudamina.	Profuse sweating at no particular time; sudamina frequently.
Pain in shoulders and chest more frequent.	Pain in shoulders and chest less frequent.	Little or no pain in shoulders or chest.
A white coat of vegetable spores and filaments often found on tongue.	Same.	
Painful decubitus in last stage; with œdema of feet.	Same.	Patient usually succumbs in from two to six weeks.
May terminate with hæmorrhage.	Same.	The disease may be complicated with tubercular meningeal trouble, and then be even more rapidly fatal.
PHYSICAL SIGNS.	PHYSICAL SIGNS.	PHYSICAL SIGNS.
With patient's mouth open it is not difficult to mark out, in front, the upper limits of the lungs—an important matter. (*Vid.* Table I).	A feeble respiratory murmur where the percussion note is normal or abnormally resonant is indicative either of tubercular trouble or lobular pneumonia.	Any previous dullness or history of pulmonary disorder is of great significance.
Rapid respiration and even dyspnœa *with* dullness.	Rapid respiration and even dyspnœa *without* dullness.	Same. Respirations may run up to 50 or 60 in the minute, but without correspondingly increased exertion characteristic of true dyspnœa.
Physical examination usually reveals enough to account for other symptoms.	Physical examination usually fails to reveal enough to account for *all* the symptoms.	Same.
Solidification of lung usually extensive.	Even after consecutive pneumonia, with bronchial breathing and ringing râles, solidification *not* extensive.	No solidification or infiltration.

When area of dullness accords with the other signs it is a comparatively favorable feature.

The presence of lobular infiltration may, in some cases, cause a hollow or tympanitic note.

'Cracked-pot' resonance over a cavity with thin walls.

Fremitus is intensified over cavities connecting with bronchi and containing air. (Of little value as a sign.)

Bronchial respiration, broncophony, and sonorous râles are heard after extensive induration.

In the first stage, feeble, harsh or puerile respiratory sounds are heard, with all the signs of catarrh at apices. (*Vid.* Table I.)

Tubercle *of itself* never gives rise to sufficient consolidation to cause dullness.

The presence of miliary tubercle may, in exceptional cases, produce the same percussion sound.

Same.

Same; fremitus may also be exaggerated by lobular infiltration and by tuberculosis.

Same.

Seldom any perceptible abnormality of percussion note, or but very slight change, as compared with the other side.

Vid. supra.

Sometimes a soft friction murmur, caused by tubercular deposit on pleural surfaces, is heard. (Juergensen.)

The different signs of catarrh, accentuated inspiration with audible expiration, whistling, sonorous bronchi over whole lung; and later râles, heard first in dependent regions.

125 STATE ST., Chicago.

MIGRATION OF LEUCOCYTES IN PASSIVE HYPERÆMIA.

By Wm. T. Belfield, M. D.

Read at the National Microscopical Congress, August 15th.

In March last I had occasion to superintend the *post mortem* examination of a case of pneumonia in which death had occurred on the tenth day of the disease. There was found consolidation of the entire left lung—gray hepatization in the lower lobe, red in the upper. Nothing peculiar was noticed in the other organs except general engorgement, especially marked in the kidneys. There had been, during our observation of the patient, not a solitary symptom of renal disease except the presence of albumen (about five per cent.) in the urine—a presence known to be common in pneumonia and attributed to mechanical congestion; for at least three features of pneumonia tend to the production of mechanical congestion: the decrease in breathing surface, the increase in the demand for oxygen made by the excessive tissue change, and the feebleness of the heart's contractions. Hence the albuminuria and the *post mortem* engorgement of the kidneys were regarded as legitimate results of the disease. A happy curiosity, however, led me to make a microscopic section of the kidney. I found the tubules rather smaller than usual, the intertubular spaces and capsules of the malpighian tufts much thickened by the presence within them of numerous small, round, finely granular cells $\frac{1}{2400}$ to $\frac{1}{3000}$ inch in diameter. These cells had every appearance of white blood corpuscles and were so considered by Dr. Danforth and others. By way of explanation it was presumed that the retardation of the blood-current due to the causes previously mentioned, had afforded the colorless corpuscles an opportunity to exhibit their amœboid movements, and that the opportunity had been improved. That this was not an inflammatory process was proved by the absence from the clinical history of all the recognized symptoms of renal inflammation, and by the absence from the urine of the exudation cylinders or tube-casts.

Nor were the microscopic appearances of the organ those of inflammation.

Within six weeks I had an opportunity of examining the kidneys of two other patients dead from pneumonia without previous history of renal disease. In each case the urine contained a small quantity of albumen but no casts, and in each instance colorless corpuscles were found in abundance in the intertubular tissue and in the malpighian capsules. At a meeting of the West Chicago Medical Society, held June 10th, I exhibited a section from one of these kidneys and another from a normal kidney, demonstrating to the satisfaction of those present the existence, within the connective tissue of the former organ, of the small round cells above described. At that time I had sought unsuccessfully for literature or a reference to literature on this subject. However, deeming the fact, if it were a fact, of the migration of leucocytes in passive hyperæmia a very important one pathologically, I determined to investigate the case, and for that purpose instituted the proceedings about to be narrated.

On June 19th I curarized a frog, cut down on the femoral vein, made compression by means of a rubber band and a piece of cork (which was readily done without compressing the artery, as in the frog the vein and artery lie on opposite sides of the femur) and stretched the web of the corresponding foot on the stage of the microscope. I employed a Hartnack No. 4 objective, and a Gundlach C. periscopic eye-piece. By watching the blood movements I easily regulated the pressure so as to retard more or less completely the onward movement, avoiding complete stagnation. After considerable pressure had been exerted, as was shown by accumulation of blood corpuscles, distension of the veins, and retardation of the current, the field was carefully watched for nine hours. During this time no leucocytes were actually observed to leave the vessels, yet several were seen just external to the walls, having apparently escaped unnoticed during the shifting of the stage. For the next ten hours the field was not observed with sufficient care and frequency to warrant any assertion of migration. At the end of this period, however, that is nineteen hours after compression was made, an almost continuous observation of the field was begun. From the 19th to the 36th hour

leucocytes were observed to leave the vessel in considerable numbers, the shortest time of exit observed being twenty minutes—the average, one to two hours. The method of locomotion did not of course, differ from that exhibited in inflammation, though at no time did I observe the excessive change of form and protrusion of long processes figured in the books. There was frequently a flattening of the leucocyte against the wall; then the appearance of a bud external to the wall; then the gradual enlargement of this bud and shrinkage of the intra-vascular portion, the part piercing the wall being apparently a tunnel through which the rest of the body passed. Often the locomotion was continued after the leucocyte had become wholly extra-vascular, so that it traveled several times its own diameter from the place of exit. It was noticed, too, that other corpuscles were prone to pass out at the particular point of previous emigration, so that sometimes several would be crowded together along the vascular wall, and an hour later would be in close proximity external to the vessel opposite the same point. This phenomenon occurred usually not in the minutest capillaries, but rather in the large capillaries and small veins, ranging from $\frac{1}{1500}$ to $\frac{1}{600}$ inch in diameter. Nor were the passages always made where the current was slowest, nor where the vessel gave evidence of greatest engorgement, as emigration from a relatively rapid current, but sparsely supplied with corpuscles, was not infrequent.

Before I had watched the process a great while, I became aware that the colorless corpuscles were not the only bodies exhibiting amœboid movements. I observed that certain red ones, without nuclei, of circular shape and small size ($\frac{1}{2500}$ inch in diameter), performed the same movements with as great celerity as did the white. (The reader is reminded that in the frog the perfect red corpuscle is of elliptical shape is $\frac{1}{1200}$ inch in its longer diameter, and has a distinct nucleus; while the white globule is, when at rest, of circular shape, its diameter being only about $\frac{1}{2500}$ inch.) There could be no possibility of confounding these small red ones with the white; for although in size, shape and movements they were identical the red color of some was unmistakeable. So extensive was the locomotion of the red ones that at the 36th hour of the experiment there were numerous red patches in the

field, which looked almost like hæmorrhages. That they were not hæmorrhages I knew, first because there were no large oval corpuscles, the red globules proper, but only the small circular ones; second, because they were fixed in the tissue, not floating to and fro in blood serum; third, because I had seen many of them pass slowly through the vascular walls.

These phenomena were witnessed not by myself alone. Dr. Bridge observed the emigration of several corpuscles; Dr. Danforth while unable to watch the process for a considerable time, was convinced that emigration actually occurred; Miss Meigler observed numerous red as well as white cells leave the vessels.

Having established the fact of the locomotion, therefore, it remains to prove the dependence of that locomotion upon mechanical congestion rather than upon active hyperæmia. That congestion existed was shown not only by the retardation of the blood current and dilatation of the vessels, but also by œdema of the web, which became evident within twenty-four hours. That the congestion was not "active" was established by two facts—first, the absence of all the phenomena of inflammation, other than the amœboid movements—i. e., the primary acceleration of the blood current, the subsequent retardation with irregular contractions of the vascular walls, etc.; second that the discontinuance of the pressure on the vein was at once followed by complete restoration of the circulation in the web, whose irregularities therefore, were dependent wholly on a mechanical impediment, and not upon any "nutritive irritation," nor vascular spasm.

This experiment has been repeated twice since the above date. In both instances the same phenomena occurred; in one, emigration began within three hours after compression was made. In this instance the pressure excited, exceeded somewhat that made in the first case.

Now the value of these facts depends upon one's ideas of pathogenesis. If he believes, with Billroth, that connective tissue is developed solely from migrated blood corpuscles, he has a key at once to the connective tissue hyperplasia of the skin and venous walls, which accompanies a varicose condition of the veins. For the mechanical congestion necessarily present must result in the emigration of blood corpuscles into the surrounding

tissues, and these are developed, says Billroth, first into spindle-cells, and finally into complete connective tissue corpuscles, causing the familiar thickening of the skin and vascular walls. In support of this view is the fact that the increase in thickness in the wall of a varicose vein is due to hyperplasia, not of the muscular elements, but of the connective tissue bundles interposed among those elements, and of the outer coat of the vessel, which is composed wholly of connective tissue. So, too, the enlargement of the spleen which usually follows portal obstruction as in cirrhosis of the liver, and the thickening of the superior hæmorrhoidal veins—"hæmorrhoids"—from the same and other conditions, are to be referred, in part at least, to the development of leucocytes which have wandered from the vessels during the mechanical congestion. Perhaps, too, the areolar hyperplasia so often found with displacements of the uterus is due to the venous congestion which usually exists in that condition.

Even the conservatives, like Stricker and Rindfleisch, while insisting on the proliferation of pre-existing cells as the more important source of connective tissue hyperplasia, admit the strong probability that a considerable part of it is due to the development of the wandering cells or colorless corpuscles first into spindle-cells, then into fibrillated tissue. Certain it is that in the repair of wounds, at least, they play a prominent part in the formation of cicatricial tissue.

The fact of emigration without any evidence of that "nutritive irritation" of tissue which Virchow presumes in active hyperæmia would seem to favor Hering's view that the exit of corpuscles is a passive rather than an active movement, due to their glutinosity, to increased blood pressure and diminished blood velocity—in short, a simple filtration of colloid substances.

Then again the behavior of the small red corpuscles is interesting as exhibiting their close relation with the white, and as furnishing another link in the chain of circumstantial evidence that the red corpuscles are transformed white ones. Such has for some time been the prevalent opinion, though never completely demonstrated. The fact that these large ones were but little, if any, larger than the white, that they were of circular shape, were devoid of nuclei and possessed the power of amœboid motion,

proves their close connection with the colorless ones; while the presence of hæmo-globin, as indicated by their color, testifies to their ability to perform at least one important function of the fully developed red ones—the transportation of oxygen.

In examining further the literature of this subject, I find in Wagner's Pathology (p. 186) Charlton Bastian cited as authority for the statement published in the *British Medical Journal* for 1868, that "red globules as well as white leave the vessels in venous stases, scorbutus, etc., by means of amœboid movements." Not having had access to the files of that journal I know nothing of his observations. The red globules mentioned are probably the small ones only; certainly I failed to observe the locomotion of any large oval discs.

AN INQUIRY INTO THE DIFFICULTIES WHICH HINDER A COMPLETE REGISTRATION OF BIRTHS.

By Henry M. Lyman, M. D.

(Professor of Physiology and of Diseases of the Nervous System, Rush Medical College, Chicago.)

In the daily papers of this city appeared, not long since, a paragraph, inspired, apparently, by the State Board of Health, in which complaint was entered against the members of the medical profession on account of their neglect of the State law concerning the registration of births and deaths. A similar complaint on the part of the local health officials, last winter, led to the passage of an ordinance by the common council of the city, prescribing the infliction of a heavy fine upon any physician or midwife who should neglect to register the births which might occur in his or her practice.

Now, this disobedience is no new thing under the sun. It is only part and parcel of that indifference to legal requirements which is one of the significant and growing evils of the present time. Everywhere there is an abundance of statute law, and every legislative body at every legislative session, seems impelled, by dire

necessity, to add, not its *mite*, but its *quantum* to the existing volume. The lawyers themselves can hardly tell what is law, and what is not—so numerous and so conflicting in some of our communities have the statutes and ordinances become. Under these circumstances, the masses pursue the even tenor of their way, doing about as they please, executing such laws as meet their real wants, and leaving the rest to sink into an oblivion from which they are at length seldom resurrected except for temporary gratification of local or personal malice.

Such being the well-known facts of the case, it seems to be worth while to consider whether this state of things is necessary and irremediable. It would appear to be a reasonable expectation, when any portion of the machinery of State becomes inoperative or fails to satisfy the desires of its authors, that some one should endeavor to search out the causes of such failure. Right here, however, begins one of the chief difficulties in the way of progress. The majority of mankind are destitute of that delineative power which is necessary to every one who would lay before himself a picture of the situation to be examined; consequently they cannot perceive clearly the relations which exist between specified evils and their causes or their effects; and they are therefore incapable of anything better than a slow, blind, empirical search for remedies against the evils of which all are conscious. This same lack of imagination—the faculty which enables its possessor to realize the feelings and the necessities of other people—deadens the majority of people against the sufferings of individuals and classes not their own. Then, again, we are to such an extent creatures of habit, that the majority of mankind would prefer to endure many little ills, and wink at much petty injustice, rather than undertake to effect a change in anything that has once received the sanction of law. This love of routine, combined with lack of imagination, serves also to incapacitate the majority of us for original investigation of the local necessities of a given community with a view to the better adjustment of legislation to those necessities. The sanitary legislation of the country affords a conspicuous illustration of these facts. Instead of studying the peculiar temper and wants of our population, and evolving, in the light of the experience of older States, a system

of laws which shall meet those wants, we are much more likely to copy or to compile an abridgement of the sanitary laws of New York or Massachusetts, which in their turn have been borrowed from the laws of England or of Belgium or of Prussia. The consequence of this method is too often the hasty adoption of regulations which, however right and proper they may be in a country where people have been trained for generations to submissive acquiescence with the mandate of an absolute sovereign, are utterly at war with the principles of democratic government and individual freedom. Then, as soon as such ordinances have been transplanted from the soil of despotism in which they first struck root, they soon find shelter under the shadow of bureaucracy which in even the freest governments finds its own interest in the preservation of existing institutions, no matter how illogical or unjust they may be.

Did time permit, I fancy it would be instructive to point out the numerous illustrations of these facts which must occur to every one who thinks. I will only recur to the example with which I commenced this paper—the registration of births. Why is it so difficult to secure what all are agreed should be done? It is done in the countries of Europe. Why not as easily here? Because the organization of society is, in Europe, based on an entirely different foundation from that which exists in America. Even in so free a country as England it is but a short time, comparatively, since the mass o the population was held under the constant surveillance of the established authorities, both civil and religious. It was part of the daily duty of the country squire to know everbody in his vicinity, and to see that every one was about his own business in his own place. It was the duty of the priest to look after all the residents in his parish, making sure that every one paid his tithes, went to confession, took the communion, and had his children safely baptized. Of course it was easy enough in such a community to secure an efficient registry of births and deaths. The baptismal fee was sufficient to make it for the parson's interest to look out for every birth within his reach. Again, in Prussia, the whole nation was organized upon a military basis. Every family was responsible to some official of the government; and for ages it has been an accepted fact that the first duty of

every Prussian woman was the production of soldiers for the king. Of course, in such a state of society it seems perfectly natural that the morning report of the nation-camp should contain a return of all the additions to his majesty's forces effected during the previous night. A registry law would only give expression to the precise and artificial habits of a people under the immense pressure of a military despotism.

But when we examine a free and independent society like our own, we find that all the conditions which have made registry laws a success in the old world are still unknown in this country. We have no official class whose existence and privileges are largely dependent upon the care with which they watch the behaviour of the mass of the population. We have over us no military tyrant who must know exactly his resources in men as well as in gold. There is no such thing as a law of entail nor any aristocratic pride of pedigree to be gratified by a long ancestral roll. Consequently, there is only the curiosity of a few scientific men that can be relied upon for the moral support of a registry law. I do not believe that in our city more than a dozen people in every thousand would be found to care for the registration of their nativity even in a family Bible. How shall this difficulty be met? By law, of course. But the law does not get executed, notwithstanding the threat of a penalty for disobedience. Why do not intelligent and generally honorable people, like physicians, obey the law? For two reasons; because they have no personal interest in its execution, and because of an invincible, though perhaps not always clearly recognized feeling of revolt against the essential injustice of the law as it now stands. The present law imposes upon every physician and midwife a special tax in the shape of postage, to say nothing of time occupied in making the returns, and offers no compensation for the extra labor and expense. This is an unjust discrimination against a certain class of citizens.

The commonwealth has the right to demand the services of its citizens, but in no free community has it the right to take such services without compensation. In the words of an eminent English statesmen, "People do not like to make a present to government in any shape or form."

The attempt to impose such a tax is a survival of Asiatic methods of despotism which are only tolerable in an autocratic system of government, where the will of the ruler is sufficient reason for any confiscation which may be practiced upon the property of the subject. It is the instinctive appreciation of this fact which lies at the foundation of the difficulty experienced in securing returns from our physicians. What is the proper remedy? The remedy which naturally suggests itself to the "uncultivated intellect," as one of the greatest of living statesmen styles such a mind, consists in the imposition of a heavy penalty for infraction of the law; and if that fails, an increase of severity is the next resource.

"Tell a person of uncultivated intelligence that any grave crime is increasing, and his first idea will invariably be to increase the severity of the punishment which is assigned to it. Tell him that it is very difficult to get evidence with regard to some particular crime, and the chances are that, if he does not *say*, he will *think* that a little mild judicial torture might have its advantages."—*Nineteenth Century*, May, 1878, p. 811.

But experience—and this method has been tried again and again without success—shows that penalties do not secure obedience. A law which is based upon no public sentiment in its favor, cannot be executed without the previous erection of a vast system of espionage which will never be tolerated in our country. The officials who are now charged with the registration of births might as well try to note the crossing of flies in the air as to follow up all the parturient women in the State. They might occasionally catch and fine an unlucky doctor, but the result would only be an accumulation of indignation against the executors of an unjust law, which would soon effect its repeal.

What, then, is the remedy for this state of things? I do not flatter myself that it is possible to suggest anything which will cover all the necessities created by indolence, carelessness and stupidity on the part of both doctors and officials, but I do believe that something may be done to improve the present situation. The first thing needful is the removal of all unjust discrimination against a particular class of people—the doctors and midwives. It costs postage and envelopes, as well as time, to

make these returns. The amount is not large to be sure; but it is as unjust for the State to add fifty cents to a doctor's taxes simply because he is a doctor, as it would be to add fifty dollars. The principle of the thing is the same in either case. It is discrimination against a particular class without a return of corresponding advantages. The State should pay for all such services just as it pays for every other service which is rendered by citizens. It need not incur any great expense—it might, as in the case of jury duty or military service by conscription, fix its own rate of compensation; but the obligation should be recognized, and the principle for which I contend should be preserved. It will not do to attempt the evasion of this argument by saying that the physician is already paid to make these returns, for such is not the fact. The fees of physicians are regulated by long established custom, and any additional charge in the bill would now meet with no more favor than the action of the horse-railway companies when they were allowed by law to collect from each passenger an extra cent to compensate themselves for the tax of a fraction of a cent on each fare. These services are either worth something or they are worth nothing. If they are worth nothing, the infliction of penalties for their refusal is absurd. If they are worth something, they should be paid for by the commonwealth for whose benefit they are rendered. But this would require increased general taxation. Of course it would; and this increase would then be levied on all alike instead of being thrown, as it now is, upon the doctors and midwives alone. Just here lies the whole difficulty in a nut-shell. The health officers are trying to get service from the doctors without paying for it. This was once tried on a considerable scale by our local Board of Health in the matter of sanitary inspection. The matter was finally referred to the courts, and they decided that services rendered to the community must be paid for, and they were accordingly paid for at the rate of one hundred dollars a head. The only difference between the two cases consists in the fact that in one instance the amount at stake was a large one, while in the other it is comparatively a trifle. The principle involved is, however, the same in both cases, and until this is recognized and respected, it will be useless to hope for complete and willing returns of births. Law-

makers who wish to suceed in the enforcement of their laws must first be sure that they are just. Of course, it will be objected to all this by the bureaucrats, that such a scheme is impracticable and cannot be put into execution. In reply to this I would merely say that the official who has not ingenuity sufficient to contrive a method by which all the necessary details of such a plan can be carried into execution without any increase of the present machinery of government, or the necessity for any actual disbursement of money, is not fit to perform the functions of a *legislator*, at least. The whole thing may be done more easily than the taxes are collected. But if, as usual, we must wait for an example from Germany or Holland, we shall have to wait a long time for justice, for, to use the words of the talented author of "Anson's Voyage Around the World," "Human affairs are not always conducted by the plain dictates of common sense. There are many other principles which influence our transactions. And there is one in particular which, though of a very erroneous complexion, is scarcely ever excluded from our most serious deliberations. I mean custom, or the practice of those who have preceded us. This is usually a power too mighty for reason to grapple with; and is the most terrible to those who oppose it, as it has much of superstition in its nature, and pursues all those who question its authority with unrelenting vehemence."

We call the attention of the editors of the London *Medical Press and Circular* to the fact that the *Chicago Medical Times* (from which they have made certain excerpts in their number for July 17, 1878, and which they seem disposed to regard as an exponent of regular medicine) is the diminutive organ of the still more diminutive Eclectic sect of medicine men in this city.

Clinical Reports.

MERCY HOSPITAL.

Two Cases of Lithotomy, Performed by Dr. Andrews, June 13th.

REPORTED BY F. E. WAXHAM, M. D.

Case 1. E. R. H., æt 30. Entered the hospital June 5th, 1878. The patient was very much emaciated, and his lungs affected with tuberculosis. He stated that he had cystitis of six years' standing, which commenced with pain in the bladder, and a frequent desire to urinate. The disease increased in severity for a year, when he began to submit himself to treatment; he then gradually improved. The sound was introduced into the bladder at two different times, but no calculus discovered. He remained quite comfortable until the fall of 1877, when he began to get worse, and was obliged to give up work. The pain left the bladder and had centered in the urethra, which became extremely sensitive. Upon entering the hospital, he was obliged to pass water every few moments, in great pain, the urine containing a large amount of mucus and pus. The urethra was so sensitive that the softest flexible catheter could not be introduced into the bladder. Soothing injections were frequently practiced in the urethra to control the hyperæsthesia. As he could not endure the introduction of a sound, he was anæsthetized with ether, June 13th. A partial stricture was discovered about five inches from the meatus; this was dilated, and after much difficulty a sound introduced into the bladder. A calculus being found, lithotomy was at once decided upon, as it was not considered a favorable case for lithotrity on account of the great sensitiveness of the urethra. The patient was placed in the lithotomy position, but it was found impossible to introduce the staff. A long beaked

instrument could be passed into the bladder, but one with a short curve could not. The sound was introduced and the incision made upon it using a grooved director in conjunction with it in place of the staff. The calculus was removed without difficulty, and weighed 8 grams. After recovering from the anæsthetic he suffered much pain, and required large doses of opium to obtain relief. The intense pain and frequent desire to pass water, soon subsided, and the patient gradually improved, although the wound has been slow in healing, a portion of the urine still passing through the wound. The patient left the hospital July 22. Time in hospital, 47 days.

Case 2. Edward Cloonan, æt 15 years. Entered the hospital June 12th. Has suffered from pain in the penis, and frequent desire to pass water, for three years. A year ago a sound was introduced into the bladder, and a large stone detected. The father objected to an operation at that time, as he had lost one child only a few months previous, from the same cause, lithotomy having been performed. Upon entering the hospital the patient was in a good condition physically. June 13th, gave ether and performed lithotomy. Great difficulty was experienced in removing the calculus on account of its large size. The tissues were bruised and lacerated to a considerable extent. The calculus measured 7 centimeters in length and 4½ centimeters in thickness, and weighed 72 grams. Notwithstanding the unfavorable prognosis, on account of the contusion of the tissues, he made a rapid recovery, suffering no pain and requiring no anodynes. Patient left the hospital July 13th. The wound was entirely closed, and the urine passed freely through the penis. Time in hospital, 31 days.

NOTES FROM PRIVATE PRACTICE.

Calculus of the Size of a Grain of Wheat Detected by the new Auscultating Searcher.

In the June number of the JOURNAL AND EXAMINER, I described and figured a new searcher for detecting minute calculi or their fragments in the bladder. It will be remembered

that the searcher was made hollow, and had attached to the external extremity a slender rubber tube and ear piece, by means of which the slightest touch of a bit of calculus in the bladder sent a distinct sound to the ear of the surgeon.

A recent case illustrates the extreme delicacy of this instrument. Mr. A. B. had, a few weeks ago, an attack of severe pain, which, from his description, I presume to have been caused by the descent of a small calculus along the ureter. From this time on, he had mild symptoms of stone in the bladder and came to the city for treatment. Introducing the auscultating searcher, I distinctly heard the tick of a stone, which was so small that it gave no jar perceptible to the fingers. I immediately introduced a very small lithotrite, seized the calculus, and drew it out. It was about as large as a grain of wheat. I searched repeatedly for other fragments during the next few days, but found no more, and no further symptoms of stone appearing, I dismissed the patient as cured. This case afforded a most satisfactory test of the delicacy of the instrument.

Since describing my instrument in the June number of this journal, Sir Henry Thompson has brought out quite a different one in London, having the same object in view. He has a galvanic battery and a microphone attached to an ordinary searcher, so as to magnify the sound produced by striking the stone. The apparatus is extremely ingenious, and gives the sounds well, but the formidable incumbrance of a battery, a microphone, etc., must seriously impair its convenience. On that account, I cannot help thinking that my instrument will be found the most useful.

EDMUND ANDREWS, M. D.

No. 6 SIXTEENTH STREET, CHICAGO.

A Visceral Æsthesio-Neurosis.

As a sequel to enteric disease, it has twice lately fallen to my lot to observe a distressing and tenacious symptom which may properly be classed among the visceral æsthesio-neuroses. It is a hyperalgesia and a dysæsthesia referred to the region of the umbilicus, but radiating probably from the nerves which preside over the excretory function of the colon, to be finally interpreted

by the higher centers. The first case was that of a physician who had suffered from colitis; the second that of a lady 60 years of age, who had passed through typhoid fever. The primary disease in both cases occurred between six and seven years ago. So close is the resemblance between the two cases that I venture to report them together. There is abnormal sensibility in the large intestine, and pain is the inevitable consequence of even a small fœcal accumulation, which calls into play the reflex action. As the morning approaches, the sleep is disturbed, and at five o'clock precisely, and daily (with only an occasional intermission, sometimes lasting for weeks), the pain sets in. The pain continues until there is an evacuation at about seven, and then gradually dies away. It does not recur in the daytime, except under the influence of sudden change in atmospheric pressure, of mental emotion, fatigue, indigestion, etc. Its periodicity and its tendency to excitation under psychic and nervous influences, shows its character to be essentially neurotic. There is doubtless some slight organic alteration of the mucous surfaces—the terminal ends of the nerves infringed upon or altered, so as, in a measure, to interfere with normal conduction of impressions. Under unusually exciting conditions, there is a free discharge of mucus. As in hepatic and enteric disturbances, generally, there is in these cases a degree of cerebro-hyposthenia and the patients are unduly anxious about themselves. It is to be lamented that they have both resorted to opium as the only "stayer of anguish." But I am gradually getting them to rely on other measures, and I have done much already by psycho-physical methods, by regimen, by tincture of colocynth and the surreptitious substitution of a *placebo* for the narcotic which in my opinion the circumstances amply justify.

JAMES I. TUCKER, M. D., *Chicago.*

"*On the Treatment of the Bowel Affections of Infancy and Childhood Incident to the Summer Months.*"

In the August Number of the JOURNAL AND EXAMINER appears an article by Dr. DeLaskie Miller, on the above-named subject, really valuable, and embodying more common-sense in the treatment and hygiene than can be found elsewhere. Yet it seems to

me that the most important factor in the management of these cases has been omitted. However important in the causation of the diseases under discussion may be a vitiated atmosphere and improper diet, it is quite certain that without a high temperature in addition, these diseases would not occur. With a pure atmosphere and good diet we have the same class of cases in the country. Heat is surely there the important factor in the production of "summer complaint." To reduce the temperature, then is the primary indication. Each little patient should be wrapped in a wet sheet extending from the axillæ to the knees, and kept in a *recumbent position.* The head should be freely bathed with cool water if hot, and no food given for the first twenty-four hours, only a little cold water if it can be had pure. Thus the temperature of the body should be *reduced to the natural standard and kept so, as nearly as possible.* If we could give our patients pure, cool air to breathe in addition, little would be left for the medication which Dr. Miller has so well summed up.

After the first day or two the activity of the fever usually subsides, but the wet sheet should be continued until the evacuations become healthy, and then replaced with a flannel band to support the abdomen. I append a typical case as the disease appears here.

J. F., one year old, a strong, well-nourished boy, fed with cow's milk from a nursing bottle. Aug. 10th. Feverish and restless; did not take food as well as usual. Aug. 11th. Increase of fever, bowels loose, ate part of an apple; p. m., vomiting and purging. At six (evening) I was called in, and found the child in its first convulsion, head hot, feet and hands cool, pulse 140. He had vomited five or six times during the previous four hours, and purged as often, the evacuations being watery with mucus and spots of blood on the diapers.

Treatment.—Free application of cold water to the head, the body wrapped in a cool wet sheet from arm pits to the knees. Hot cloths to the feet and legs. The child recovered from the convulsion and became sensible in about half an hour. No recurrence. At 9 p. m. child feverish and restless, pulse 115. Gave a mixture containing six drops of paregoric and six drops of syrup of ipecac every hour until quieted. Also kept on the wet

pack, and kept the head cool by bathing. No food. Aug. 12th. a. m. Child slept three or four hours, and has had three evacuations of the bowels; no vomiting; is still a little feverish, pulse 108; wants food. I directed 50 Gms. boiled milk every three hours, and a tablespoonful of cool water every half hour, if thirsty. Continue the wet sheet and give paregoric and ipecac every two hours. Evening. He had two evacuations to-day, the last one small and healthy-looking; skin cool and moist; head cool; playful. I directed a flannel bandage to be placed around the abdomen and strict attention to be paid to the diet. No medicine. Dismissed.

P. A. ALLAIRE,
Aurora, Ill.

WE are pleased to note that the adoption of the metric system in the pages of this journal has already produced most desirable results. Our exchanges have given us due credit as the first of American medical journals to take this decided step; and a few have not hesitated to follow in the same path. Many of the practitioners in Chicago have already begun to employ the system exclusively in the writing of their prescriptions, and all of our really high-class druggists have prepared themselves to compound medicines so ordered.

We have received many acknowledgments of the benefits derived from the change, and have every reason to congratulate ourselves upon the result.

WE have received from the American Metric Bureau a number of slips convenient for carrying in a physician's call book, which explain the metric system so that it becomes not only intelligible but of practical value. We will be pleased to distribute them to physicians who will enquire for the same at the Library rooms, No. 188 South Clark st.

Society Reports.

NATIONAL SOCIETY OF MICROSCOPISTS.

(Reported by W. T. Belfield, M. D.)

The National Microscopical Congress, which has just closed its labors at Indianapolis by resolving itself into a permanent organization—the National Society of Microscopists—has completely vindicated the right of microscopy to recognition, if not as a distinct science, certainly as a distinct method of scientific investigation. The generally good quality of the work presented by individuals and the advanced position assumed by the members collectively—by the virtual endorsement of wide-angled lenses and by the formal adoption of the millimeter as the unit for micrometric measurement—must give an impetus and dignity to microscopy which will be apparent in the work of the coming year, and in the increased attendance at the next session. Conceived as a mere experiment, called in the very teeth of the microscopical subsection of the American Association for the Advancement of Science, it assembled thirty delegates from all parts of the Union between New York and California—some of 'them men with national reputations. They came actuated, as their work proved, by a scientific spirit, and returned well pleased with its manifestation in one another.

Limited space permits only the briefest summary of the proceedings. On the first day the principal feature was a paper by Prof. Rogers, of Cambridge, embodying the result of a year's faithful labor under peculiarly favorable circumstances—a monument to the author's untiring energy and industry. He demonstrated the possibility of far greater delicacy and accuracy of micrometry than has been used, and clinched his arguments by the presentation of a plate whose rulings showed a maximum error of

$\frac{7}{1,000,000}$ inch. Members were invited to compare and correct their micrometers by this standard. The second day was devoted chiefly to the "war of the lenses." Prof. J. E. Smith, of Cleveland, and Dr. G. E. Blackham, of Dunkirk, couching the lance for the high angle, while Prof. R. Hitchcock, of New York, battled for the low. On this, as on every previous occasion, each side claimed the victory; yet judging from the number of conversions from low to high-angled lenses, we may safely credit to the champions of the latter a fair degree of success. Indeed, with all deference to the admirable papers presented, the conversions were made not so much by the arguments advanced as by the actual demonstration on the spot of the superiority of the wide-angled glasses, when properly handled, in accomplishing every result required of the microscope.

In all probability the war will last but little longer. One after another the champions of the narrow angles, from Col. Woodward down, have surrendered, and it now remains simply to diffuse a knowledge of that fact among the rank and file, and let the leaven work.

The third day was given to micrometry, and resulted in the formal recommendation to microscopists that the interests of science would be advanced by the general adoption of the millimeter as the micrometric unit. The general approval with which the proposition was received showed that its advisability was recognized.

The fourth and last day was given to miscellaneous papers and to permanent organization. To such action there was considerable objection, a large faction favoring annexation to the American Association for the Advancement of Science. A majority, however, deemed the subject worthy of independent recognition, and such was secured.

While the papers were as a rule excellent, the most valuable and interesting work was done at informal sessions in individual study. It was practically a division into sections by natural selection, where those following the same lines of study interchanged opinions and arguments about their hobbies, illustrating their views and defending their positions by practical demonstrations with their microscopes. On these occasions, too, there was much

exhibition and comparison of instruments, objectives, slides, and all the paraphernalia of the microscopist, so bewildering to the uninitiated. In these soirées the writer was impressed with the lack of proficiency shown by the medical microscopists. It seems strange that lawyers, merchants, clergymen and accountants who use the microscope as a scientific luxury should so far excel physicians, who derive direct pecuniary benefit from its use. Yet such was generally the case. A list of the papers read, or even a synopsis of the principal ones, would take more space than is allotted to this subject. The writer can not forbear calling attention, however, to the paper of Prof. Rogers, already referred to; that of Dr. Blackham, on "Angular Apertures;" of Dr. Ward, on "Recent Progress in Microscopic Ruling;" and the "Angle of Aperture," by Prof. R. Hitchcock.

The session closed with a grand soirée, at which 3,000 fashionably attired persons jostled one another for a chance to gaze for an instant through an instrument that they didn't understand, at an object that they knew nothing about, and thus to verify their oft repeated exclamation, "How strange!" Yet we were thus enabled to show our appreciation of the hearty hospitality for which the good people of Indianapolis are justly celebrated, and which they exhibited to perfection toward us.

INDIANAPOLIS, August 17, 1878.

MICHIGAN STATE BOARD OF HEALTH.

The regular quarterly meeting of the Michigan State Board of Health occurred July 9, 1878, at Lansing, all the members being present.

Dr. Hitchcock offered the following resolutions, which were adopted:

Resolved, That this board respectfully request the board of regents of the University of Michigan and the trustees of the Detroit Medical College to establish in their respective institutions, at the earliest practicable moment, full chairs of public hygiene and fill the same with thoroughly competent professors.

Resolved, That this board respectfully request the controling

board of all the collegiate institutions as well as the high-schools of the State to see that a course of instruction in public hygiene be given in each of their several institutions.

Dr. Kedzie presented some results of his investigations on the subject of lead-poisoning by means of tinned ware and other vessels containing lead.

He said it is well-known that there are substances actively poisonous when taken in large doses, that when taken in small but repeated doses often produce effects so obscure that they may be mistaken for the symptoms of some chronic disease. Lead, arsenic, antimony, and copper are examples.

The chronic poisoning which may be caused by minute doses of any of these metals, and the possibility of mistaking such metallic poisoning for some disease of a different nature, should warn us against their use, or make us careful and guarded while using them. Vessels in daily use for preparation or serving of food are especially liable to affect the physical condition if they contain any material which will insidiously sap the foundations of health and strength.

Culinary vessels which are cheap, durable, and convenient, and without injurious influences on the health, bear an important relation to the comfort and well-being of the people. Of all cheap metals for such use tin fulfills those conditions better than any other. It is compartively cheap, resists oxidation by exposure to air and water, has a white color, is not readily dissolved except by strong mineral acids, and the only salt of tin which is actively poisonous is the chloride, which will never be formed in the domestic use of tin vessels. The readiness with which iron surfaces may be coated over with it contributes to its valuable uses.

Unfortunately, while tin is comparatively cheap and safe, lead is cheaper and very dangerous. Yet the two metals readily unite forming an alloy which may be used in place of tin, but which will generally oxidize and be dissolved by acids more readily than either metal of which it is composed. The danger of poisoning by the use of such vessels is very great. The attention of the State board of health has been called to this subject by a letter from Dr. Dorsch of Monroe, who writes that he has seen cases of *paralysis agitans* which had been taken for chorea, although other symptoms of

lead-poisoning were present, and investigation showed, in all cases, that cooking and eating with tin spoons or in earthen and iron vessels with a coat of lead were the cause. The same is true with milk vessels. The acid dissolved the lead salts, and children are poisoned, dying by tubercles of the brain, meningitis, fits, and paralytic affections.

Grown persons do not escape, although resisting longer. A similar danger arises from tea and coffee pots of earthern ware or composition metal, from tin sieves and funnels, and almost all cooking utensils used by the poor. They are about equally as dangerous as the adulteration of food and spices, so common all over the country.

The danger of lead-poisoning is a matter of great importance because so large a proportion of our population employ tinned vessels for culinary and table use. The alloy of tin and lead oxidizes much more readily than pure tin, and the oxide of lead is very soluble in acetic acid or vinegar, or lactic acid, forming sugar of lead. It also forms salts with malic and citric acids, which are contained in apples, cherries, gooseberries, currants, or any acid fruits. When cooked in vessels containing lead or even placed in them for some time, they are liable to take it up and become very injurious thereby, because all salts of lead are poisonous. In this way a large portion of our daily food may be a vehicle of poison if prepared or contained in vessels containing a sensible amount; and this danger is greater because the compounds of lead are cumulative in their influence. A person may not be poisoned by one or two small doses, but minute doses taken for a long time will break the health and even destroy life.

The doctor said that of a large number of specimens of tin plate, tinned iron, and other culinary articles examined by him, he found in almost every instance an alloy with lead, and it was often present in large quantities. It is an astonishing fact that a large proportion of the tinned wares in the market are unfit for use because of the large quantity of lead with which the tin is alloyed.

TEST FOR LEAD.

Place a drop of strong nitric acid on the tinned surface and rub it over a space as large as a dime. Warm it very gently till dry, and then drop two drops of a solution of idodide of potassium on

this spot. The bright yellow iodide of lead will form on the spot if tin contains lead. This test can be rapidly applied and the results are decisive. The doctor was informed that a peculiar kind of tin plate, the tinning composed mostly if not entirely of lead, was coming into general use for roofing eave troughs, and water pipes. The lead thus exposed would be in conditions favorable for oxidation, and a quantity of oxide and carbonate of lead would be washed away in the rain water and deposited in the cistern with every storm. Susceptible persons may be poisoned by washing in such lead-charged water, and all persons drinking it even after it has been filtered will be in danger of chronic lead poisoning. Earthen vessels are usually glazed to overcome their porosity. In many cases this glazing consists of fusible silicates of the alkalies, and alkaline earths. These have no injurious influence on the health. Oxide of lead when added to the alkaline silicates, borates, etc., makes a very fusible and closely adhering glazing; and is sometime used, but its use is very dangerous, especially if the vessels contain acid substances. The glazing decomposes and lead salts form which either dissolve or are mechanically suspended in the contents of the jar, and there is great danger of chronic lead-poisoning. This danger is unfortunately very common.

ENAMELED IRON VESSELS.

Within a short time an enamel has been successfully applied to vessels made of iron plate, the enamel or glazing taking the place of tin coating on tin plate. As these vessels are coming into general use it is a matter of public interest to know what would be their influence on public health. He said that a culinary vessel to be safe must be impermeable by water and grease. Metals, especially where vessels are made without seams or joints, such as pressed tinware, glass, and many kinds of porcelain, are admirable in this respect. Glazed crockery after the glazing is fissured is very poor in this respect. If the new enameled ware shall prove satisfactory it will be an important acquisition. At the present time the most hopeful outlook for good, safe, and cheap culinary vessels lies in the direction of some fixed unabsorbent enamel for pressed iron-ware which will maintain an unbroken surface under all conditions of domestic use.

Another indispensable condition for a safe culinary vessel is that it shall not contain any poisonus material by which the food cooked or contained in it, shall be injuriously affected.

The specimens of granite-ware which he had examined failed to reveal any poisonous or injurious substance. He regarded it as a safe material to use, but feared its power to resist the tendency to crack after it had been frequently heated. The marbleized iron-ware presented very different results. The enamel was found to contain a large amount of lead, and even traces of arsenic were obtained fron the enamel by the use of Marsh's apparatus. In a quart basin of this marbleized iron-ware he placed eight ounces of water containing five per cent of nitric acid, heated it boiling hot, and kept the whole in a warm place 24 hours, then evaporated the dilute acid to dryness, dissolved the residue in water, filtered, and from the filtrate precipitated the lead, obtaining in this way what was equivalent to 23 grains of lead. In a similar basin of marbleized iron-ware eight ounces of vinegar (free from lead) were placed and kept in a warm place 24 hours, and then treated in the same manner as the dilute acid. This resulted in obtaining what was equivalent to seven grains of lead. On powdering some of of the enamel and heating it with concentrated acids, very distinct traces of arsenic were obtained. This was probably not present by design, but accidentally from being contained in some of the substances used in making the enamel. A culinary vessel which contains so much lead, and in such a state of feeble combination that eight ounces of ordinary cider vinegar can in 24 hours dissolve from a quart basin what is equivalent to seven grains of metallic lead, must be a very unsafe vessel for general use.

CHICAGO MEDICAL SOCIETY.

Meeting of August 5, 1878, at the Grand Pacific Hotel. The President, Dr. E. Ingals, in the chair. Fifty members present.

Dr. Tilley exhibited the microphone, illustrating its construction by several instruments. The friction caused by the movement of a camel's hair brush across the frame of the instrument was rendered quite audible to several persons at once, and the

ticking of a watch was distinctly heard at several telephones at the same time. Dr. T. expressed the opinion that at present the instrument did not promise any advantage over the instruments already in use for physical diagnosis, corroborating the opinion expressed by Dr. Clement Dufries, of England. Attention was called to a certain resemblance between the instrument and the middle ear, the resemblance being illustrated by a microphone the frame of which was a wooden ointment box. The instrument itself is of the most simple construction, consisting of three small pieces of carbon, held in position by a framework of wood, two of the pieces being attached firmly to the frame work by a wire forming part of an electric circuit being connected with each piece. The third piece is held loosely between the other two pieces, the points of contact being rendered as fine as possible. The battery used was composed of two chloride of ammonium cells, but a more powerful battery would have been more effective. As a receiver of the sound the telephone is necessary.

Under the head of miscellaneous business the following resolutions were presented with reference to an advertisement which had appeared in the daily papers, displaying the names and titles of a number of Chicago physicians.

Resolved, 1st, That the Chicago Medical Society considers this advertisement an offense to the honor and dignity of the medical profession.

2d. That the secretary be instructed to notify these physicians that their names are being used in this manner, and request of them an explanation.

After considerable discussion, the resolutions were adopted by an almost unanimous vote.

COMPLIMENTS OF THE SEASON.—"THE CHICAGO MEDICAL JOURNAL AND EXAMINER * * always spirited, high-toned and able."—*Edinburgh Medical Journal*, May, 1878.

Selection.

MEDICAL EDUCATION IN FRANCE.

THE WAY MEDICAL APPOINTMENTS ARE SECURED — THE OVERCROWDED PROFESSION IN THE UNITED STATES, AND OUR MEDICAL COLLEGES. VAGINAL EXAMINATIONS IN PARIS. THE PAQUELIN CUATERY.

To the Editor of the Medical Record:

SIR:—If I had the wealth of a Vanderbilt or an Astor, I would advertise a free excursion ticket and a week in Paris to ten thousand of our medical men, on the sole condition that during that time they made themselves familiar with the system of medical education and appointments in vogue here, and witnessed a public examination. This examination, or *concours*, is the admirable machinery by which the results of prolonged application are determined and the rewards adjudged to the meritorious. A man needs no friends, no influence, provided he has brain-power. Let him work. Step by step he rises, until he reaches the goal —eligibility for appointment to one of the chairs of the *Ecole de Médecine*. This is the sole position to which candidates are directly appointed without previous immediate competition by *concours*, and possibly some wire-pulling may ultimately determine a choice. But here is an embarrassment of riches. The government is jealous of a school that has had for teachers such men as Orfila, Trousseau, Cruveilhier, Malgaigne, Berard, Nélaton, and Velpeau—jealous, I mean, of the repute and lustre of the past lights, and there is no chance, no possibility of an unworthy appointment. It is a precedent, so far as I know never violated, to take the new incumbent from the list of *professeurs agrégés*, and when one knows the innumerable tests to which it is necessary to sub-

mit before one is permitted to write *agrégé* after his name, it is certain that if wire-pulling is employed, it is because of the equally extensive attainments of those who are eligible. When men know everything about medicine, it is impossible to say that one candidate is more worthy than another.

My reason for desiring, as a possibility, a great number of American physicians to come and see the methods here is, that I doubt not some improvement will result therefrom to our own wretched system. Patriotism is all very well in its place, but I am not one of those representatives of the great republic who go about the Old World resolved to find nothing there in which America cannot lick all creation. Indeed, if I had not my hospital certificate to fall back upon, I doubt whether I would announce myself as the bearer of an American diploma. The youngster with his new parchment, certifying to his being a *virum probum*, and all the rest of it, proud of honors won by a diligent grubbing upon Neil and Smith's Compendium, will receive a great shock when he learns that he is suspected of having obtained his document by an equivalent of money and nothing else, for these Frenchmen know well that to obtain a *bona fide* diploma from the best New York schools, the money is the main thing, and consequently they hold his cherished possession in the most particular contempt. Are they not fully justified? To graduate here, a native must first have his baccalaureate diploma. The School of Medicine does not even accord a matriculating examination to French students. The latter must first be prepared by general for professional study. There are five separate examinations to pass, and at the beginning of every third month the student must take an "inscription," that is, register his name at the bureau of the Faculty. After four inscriptions, he is allowed to come up for examination in chemistry, natural history and botany. After the twelfth inscription, the second examination takes place. This is in anatomy and physiology. At the end of the fourth year, the sixteen inscriptions having been made, pathology, hygiene, legal medicine, pharmacy, materia medica and therapeutics are the subjects for examination. The last examination—the fifth—is instituted at the Hôtel Dieu or La Charité. This is a practical test. The thesis amounts to something else than a re-

hashed chapter of a text-book. It is printed, and if exceptionally good, lays the foundation of a reputation for the author. Lastly, students serve in the hospitals, and go through the wards with the professors.

There is real clinical instruction—not merely talks to several hundred persons assembled in an amphitheatre. Let the newly-made M. D. of one of our New York schools ponder on these things, especially if he has taken two full courses; the first, at a winter college, the second, the ensuing spring, at one of those accommodating institutions specially organized so that a man can assume all the honors of graduation after paying his money—this always first—and attending, or strictly speaking, waiting during a course of lecturing of eight months. Medical men here know these things, and very properly decline to consider the product of our own ridicuously superficial and inadequate course worthy of any comparison with their thorough training of aspirants for a degree. Their own professors are men of eminence who have won their positions and are paid by the government; they know that in our numerous schools the professors appoint themselves, and by public advertisement and underbidding—such as is found in the circulars of some of our colleges, addressed to physicians and offering to discount the cost of a course to their students—compete for the prize of a large class. Here the only interest of the examiners is to determine the fitness of the candidate to assume the honors of his profession, and they rather enjoy plucking the unlucky dullard! With us self-interest, the money paid, and numerous considerations equally pertinent, combine to insure tender treatment at examinations, and the individual whose gross ignorance and stupidity compel his rejection at the hands of the more important school, can search further with the certainty of finding some impecunious "university" glad to render him full equivalent for his fees.

Here, when a hospital position is vacant, they do not load some well-known name with the additional title, or push a nonentity into the place, to the amazement of those who wonder by what elaborate machinery of wheels within wheels this kind of business is done while the seat is yet warm from the previous occupant. On the contrary, a general public announcement invites

those who are entitled, by reason of many previous competitions, to hand in their names, accompanied by their contributions to medical literature, and a record of honors, past and present. This is but preliminary to a new and formidable test, and the decision is made by strict, impartial, skilled judges of the quality of brains—judges who themselves have proved, likewise by public *concours*, their fitness to sit in such a tribunal. These men have heard of our beautiful and simple process, known to the vulgar as *boosting*. They know how a man who walks on the stage at Steinway's, or the Academy of Music, to the music of the band, and after having been prayed over, to receive a dummy diploma with blue ribbons, may have invisible letters marking him as the special *protégé* of the faculty and the certain future incumbent of a vacant or specially-created chair. It is understood here that the favorite will readily obtain a dispensary position and a "professorship;" that next he will be found airing his anatomy as a demonstrator, and as the proprietor of a favored "quiz;" that, *presto!* the spring is touched, and the humble set of poor practitioners who knew him as a classmate—then not distinguished for anything in particular—look up to him standing on the dizzy heights of a full professorship. Here there are complaints of the overcrowded state of the profession in France, yet the bulletin board of the medical school contains at the present moment no less than ten different appeals from this or that mayor begging a doctor to come and settle in his locality, guaranteeing board, providing the indispensable *voiture*, and offering a stipend of from one to three thousand francs—this sum being over and above the receipts from practice. If a man chooses to work he is absolutely sure of success. There are numerous positions, salaried and desirable, open to any member of the French faculty; but for these there is first the inevitable *concours*.

Is it possible for us in America ever to have a better system? It is only by personal appreciation of the way medical matters are managed here and in Germany, even in England, that the shame and scandal of the way of doing similar things at home force themselves with effect upon the observer. This subject can never be old or trite until the disinterested part of the profession take matters in their own hands, and not merely demand but

work reform. Here the profession is under governmental supervision, in governmental pay; a multitude of venerable forms appertain to it, and the machinery works with the ease and noiselessness that results when time wears away all points of friction. It is as idle as undesirable to wish for legislation on the subject in the United States. Congress has no proper concern with us, but reform is the proper function of the body of intelligent young medical men who must know and feel the disgrace that attaches to us from a system of education that permits a ploughboy or a day laborer, with the one single and only indispensable requisite of a little money, to take his seat on a bench to hear lectures on subjects the very terms of which fall on his ear as the words of a foreign language, and, after eight months—possibly of continuous real or nominal attendance—to be turned loose on society to practice on its infirmities, and to talk in bad English virtuously and indignantly against the quacks. Besides, it is against all reason that the annual spring tides of M. D.'s, fledged by the patent incubating process, are thrown, year after year, on the community, to diminish still further the absurd figure, 600, expressive of the number of people to which there is one physician. Who is benefited by this host of annual accessions—the hosts themselves? No. The body of the profession? How many times has it happened that a new-comer in a locality settled and was doing fairly, with a constituency just sufficient to keep him so, when the next year one, two or three fresh aspirants, direct from college, came to the neighborhood, spoiled his own business, and went on starvation rations themselves? Is the community at large benefited by new accessions to our ranks? In one respect only: the cheat, whose credit is exhausted everywhere else, can always find a physician to serve him without fee. Who then remains to be benefited by the spring hordes? The thousand professors who compose the faculties of the private speculations known as colleges. It seems that for these favored individuals everybody else must suffer. Many of these institutions are rich. They control all the patronage, so that necessarily eminent men belong to them as teachers. To speak the truth about them is not the way to preferment, but the majority of us had better

make up our minds that we can't all be professors, and try for something that united action will make attainable.

I started to write about Paris medical matters, and have gone off riding a hobby instead. The fact that hospitals have their clinics and shows at eight or nine o'clock in the morning makes the effort to attend bad for lazy people. Fortunately I am located near that model of hospital structure, the new Hôtel Dieu, and most of my sight-seeing has been there. Richet, the crack surgeon, is getting old, and shows much shining pate. I never saw a man examine a case more thoroughly. Jolly little Kusco, or Cusco, him of speculum fame, I believe, handles women in a way that would excite execration at home, and which I can't believe is proper anywhere. To expose women from their feet to their breasts, without the comforting pretense of a sheet, and to punch their abdomens as if he was going to dig the uteri out through the walls, is not the way to make the examination chair a joy and delight. I saw one young woman of some personal attractions, and who seemed to have some modesty left, although she was a low-class French woman, tremble as if in ague during the ordeal, and shriek with pain when he forced his very short fore-finger up to the cervix as if he intended to carry all before him. The benzine cautery is much used here. The most painful operation I ever saw without an anæsthetic was a sarcoma removed from the root of the neck. An incision was made around the base of the tumor, save that two little isthmuses of skin were left above and below until the growth had been severed from its connections beneath. These bands of tissue were burned across, and the vessels cauterized at the same time. Lastly, the islands of skin were *burned* through. Save this last feature, the operation struck me as just the procedure for dangerous situations. But it had an unpleasant suggestion of the time they amputated with red-hot knives, and Ambrose Paré, could he have seen it, would doubtless have been scandalized at the abandonment of the ligature.

The most striking thing to a New Yorker about this hospital is the building itself. Save that palace for paupers—the new St. Thomas' hospital in London—the Hôtel Dieu is unquestionably the finest structure of the kind in Paris or London. It contains

at present only six hundred beds. A number are yet to be added, but it covers a much larger space than Charity or Bellevue, and in appointments and service is only rivaled by the New York Hospital. I suppose our commissioners would give up the ghost if it were proposed to put up a building for a public hospital with the corridors and two immensely long covered galleries of fine dressed stone, without a suspicion of plaster; where each one of a long line of stone columns must have cost a large sum; where a chapel of really tasteful architecture looks as solid as if it had been taken bodily from a part of *Notre Dame;* where a steam engine runs day and night to fan fresh air into the wards; where every appointment is of the most costly description; and where, last but not least, the patients are addressed as *messieures* and *mesdames les malades.*

PARIS, France. T. K. CRUSE.

A FABLE.—A black Crow, with a white neck-tie and gold Eyeglasses, was once perched on a Limb of the Law of Ethics, having in his beak a Big piece of Cheese, wrapped in a Newspaper containing his Advertisement. At the foot of the tree were more than a dozen Foxes who Professed Medicine.

"Pray let us hear your superb voice," chorused the latter. "Most willingly," responded the Crow; and he unwrapped the Cheese, which he carefully deposited upon another Limb of the Law, and threw down the Newspaper, which the Foxes at once devoured for the sake of the scent of the Cheese which still hung round It. This done, the Crow favored his auditors with the popular ballad: "It's naughty but it's nice!" and, after having flung some Brazilian pebbles into the crowd, he quietly enjoyed his Cheese.

Moral.—For a fracture of the Code, continued "extension" is bad, and the Newspaper splint worthless. The best dressing is *Cheese à la Brazilienne.*

ÆS OP(TIC).

Translation.

UNDER WHAT CONDITIONS CAN THE NASAL DOUCHE BE EMPLOYED WITHOUT DANGER?*

By Dr. Weber Liel.

(*Lecturer on Otology at the University of Berlin.*)

(*Translated at the Author's request by* F. C. Hotz.)

Gentlemen: You are aware that the first requirement in the treatment of affections of the naso-pharyngeal space is the frequent and gentle cleansing of the diseased mucous membrane. It is not only desirable, but almost always necessary that the medicaments be applied to parts which we cannot directly reach with instruments.

Theodore Weber's nasal douche seemed, in many respects, to accomplish this purpose; and aural surgeons everywhere employed it. The favorable results obtained with it, accounted for its growing popularity. Recently, however, many physicians have changed their opinion of the usefulness of this hitherto popular instrument, as a great number of cases were published, in which the use of the nasal douche was followed by violent aural inflammations, sometimes jeopardizing the life of the patient. These observations lead to the conclusion that the inflammation was caused by the entrance of some of the fluid which passed through the nose, into the Eustachian tube and tympanic cavity. Some, considering this accident unavoidable, discountenance the use of the nasal douche altogether; while other surgeons believe they

* A paper read before the Medico-Chirurgical Society of Berlin, Dec. 28, 1877.

can obviate the entrance of fluid into the middle ear by certain precautions and by modifications of the douche.

The fact is that all American, English and German surgeons who have written on this subject, only consider the possibility or impossibility of preventing fluid from entering the middle ear. *They entirely forget to ventilate the question whether the entrance of fluid into the middle ear always causes an inflammation.* I shall presently show that this is not the case, but that the occurrence or non-occurrence of otitis after the entrance of fluid into the middle ear is determined :

(*a.*) By the quality of the injected fluid.

(*b.*) By the state of the mucous membrane of the naso-pharyngeal space, Eustachian tube and tympanic cavity at the time when the douche is applied.

(*c.*) By the behavior of the patient during and directly after the douche.

But let me first say a few words in regard to the various methods of douching the naso-pharyngeal space.

I presume you all are familiar with Th. Weber's nasal douche and its application. It will, therefore, be sufficient for our purpose to draw your attention to the fact that its current of water is not uniform and continuous ; it is gradually growing weaker, because the column of water in the vessel is steadily decreasing, and it is often interrupted, because the hand holding the tube cannot be kept absolutely steady and immovable. For these reasons, we notice during the operation of the douche the contraction of the visible musculature of the palate is not uniform, but the velum and the posterior arches are in a trembling motion of constantly changing tension. But if it is the levator veli muscle which bars the introitus tubæ against the entrance of fluid as it flows by, we can conceive the possibility of its entering the tuba at the moments of decreased muscular tension. I have also shown, by experiments with the different kinds of nasal douches, that they cannot be used longer than half a minute without sneezing or swallowing. By these acts the mouth of the tuba is opened, and the fluid enters it, unless the douche be instantaneously discontinued. Still greater is the possibility that fluid will get into the middle ear if a Davison's syringe is employed for the

douche. The fluid is thrown into the nostrils by jets and the flow is very irregular and variable in force, and consequently the state of contraction of the muscles varies constantly. The danger is decidedly lessened by following Dr. Fraenkel's advice, which is, that one should begin to sound the German vowel u (oo in English) before the water is started, and continue the pronunciation of this vowel as long as the water is passing through the nostrils. During this phonation of u, the levator palati is very strongly contracted, and its belly is crowded against and into the ostium pharyngeum tubæ. But if the closure of the isthmus of the pharynx is overcome, as it might be at any time when the pressure of the water is suddenly increased by a stronger compression of the rubber bulb; if then deglutition becomes a necessity, it would require a great deal of practice and presence of mind of a patient, to stop the douche before he stopped sounding.

For many years I have been using the syringe for nasal douche. My naso-pharyngeal syringe is of glass, so that I can see whether its contents are free from impurities; it holds just enough water to fill the naso-pharyngeal cavity of an adult. Its bulbous nozzle is of hard rubber; the piston is of metal, and the piston rod ends in a ring for the thumb. The injections are made in the following manner: the head of the patient being held up as straight as possible and steadied by the physician's one hand, the nozzle of the syringe is inserted into that nostril which on a previous examination was found the less pervious; the fluid will thus find no difficulty in flowing off through the other nostril. If we watch the arches and velum of the palate during an injection into the nostril, we shall observe the posterior arches by a sudden contraction, approach each other, and the posterior wall of the pharynx; we shall further observe how, by an energetic reflex contraction of its musculature, the velum is drawn upwards, and its posterior edge laid firmly against the posterior pharyngeal wall. We shall not observe any tremulous movements or unequal variable tension of the parts, as a careful inspection detects when the other modes of the douche are employed. This powerful contraction of the levator palati beginning and ending with the injection, so thoroughly occludes

the mouth of the Eustachian tube, that no fluid can be forced into it. If the fluid is ejected from the syringe with less pressure, the reactionary contraction of the muscle is less strong accordingly, but still sufficient to keep the fluid out of the Eustachian tube. There is another advantage the injection with the syringe has over the nasal douche. With the syringe we are able to reach and cleanse thoroughly all parts of the naso-pharyngeal space, while experiments on dead bodies have convinced me that the fluid thrown into the nostrils with Weber's douche flows over the parts in the immediate vicinity of the posterior nares, but never reaches the roof of the naso-pharyngeal cavity. It is, however, not always allowed to execute the douche, in the described manner. In certain persons the fluid, though thrown into the nostrils with moderate force, enters the middle ear comparatively easily. We shall find in such cases that during the act of deglutition or phonation the soft palate is incompletely raised. During the douché, then, such persons can scarcely abstain from swallowing, because the water runs down behind the velum instead of returning through the other nostril. The rhinoscopic examination of some such persons has shown me that where the naso-pharyngeal space was insufficiently closed against the fauces, the ostium tubæ was imperfectly occluded by the contracted levator muscle. Children have a very short and wide Eustachian tube; and the fluid when injected even with very little force, often enters the middle ear, and therefore we have to be particularly cautious; although the experiment shows that in children the entrance of fluid into the middle ear is seldom followed by inflammation. On the other hand, there are numerous cases where the most forcible injection, or any other mode of douching, applied most improperly and carelessly, does not cause the entrance of fluid into the tuba. They are those cases in which the wall of the Eustachian tube is collapsed from inefficiency of its musculature, or its lumen narrowed by catarrhal swelling of its mucous membrane. This point can be ascertained by means of bougies and the air-bath, and is of great importance in deciding the question whether and how in a given case the nasal douche can be employed.

Speaking now of the conditions under which an inflammation

supervenes upon the entrance of fluid into the middle ear, I have first to state that all publications on this subject have overlooked one, and in my opinion the most essential point.

We must ask the question: Do *all* fluids exert so noxious an influence upon the middle ear that their entrance must result in a violent inflammation?

Gruber stated that after injections of medicated fluids into the middle ear, he often observed symptoms of irritation rather than inflammation. And further I beg to mention that in the "*Deutsche Klinik*," No. 3, 1866, and "*Monatsschrift für Ohrenheilkunde*," Nos. 4 and 6, 1870. I communicated the fact that different fluids caused different degrees of inflammation; that, for instance, injections of sulphate of copper or zinc were followed by violent otitis media, but never caused perforation of the membrana tympani, while silver nitrate or corrosive sublimate caused a violent otitis with rapid perforation of the drum head.

During the past year Dr. Acker, of Washington, D. C., and I made a series of experiments on animals to test the effect different medicines would have upon the middle ear if they get there by the way of the Eustachian tube.

The result of these experiments (which Dr. Acker described in his dissertation Ueber Injectionen in den Nasenrachenraum und in die Tube, Berlin, 1877,) was as follows: "If we injected with some force a colored fluid into one nostril of a rabbit, the other nostril being closed, we could always find, at the post mortem some of the fluid in the middle ear, but if the other nostril was *not* closed during the injection, the fluid returned in a stream through the nose, and the autopsy confirmed that no fluid had entered the tympanic cavity. Numerous experiments with warm solutions of salt in various dilutions showed that shortly after the entrance of salt water into the middle ear a violent inflammation was developed. The vessels of the promontory and membrana tympani were highly distended; the secretion was increased and contained large numbers of white blood cells. After some time perforation of the membrana tympani took place. In all the animals thus experimented upon, the membrana tympani was perforated, and in one rabbit the tympanic cavities and both external meatus were filled with a fibrino-

purulent exudation. Injections of weak solutions of nitrate of silver were also followed by purulent otitis media with perforation of the membrana tympani.

But the results were entirely different, if we used solutions of soda carbonate for injections. In no case it resulted in the perforation of the membrana tympani, although in some tympana the traces of a past inflammation could be positively discovered.

These results fully agree with the observations made in men. And I would draw your attention particularly to the fact *that salt water had been employed in all cases where dangerous otitis media supervened.* The use of the nasal douche in men, just as the injections of salt water in animals, caused otitis media acuta with perforation. On the other hand, the experiments with pure solutions of soda prove that this is a far less dangerous remedy for the middle ear. It is only through a combination of other noxious influences that strong solutions of soda may perhaps cause subacute inflammation in the tympanum; but I nave never observed such accidents after soda injections. By means of my tympanic catheter I am able to force the solution directly into the tympanic cavity. I have practiced this mode of treatment a number of years for different affections of the middle ear, and I can positively affirm that the introduction of soda solution into the tympanic cavity has not in a single case been followed by pain or inflammation. One might say it is uncertain whether, in this treatment, the medicine gets into the middle ear at all. This objection is easily met by the following experiment: The medicine being colored by a small addition of aniline red (which must be free from arsenic) the tympanic catheter is introduced through the silver Eustachian catheter into the tympanic cavity, and the fluid forced into the tympanic cavity by strong compressions of the air bag. After this proceedure the presence of the colored fluid behind the membrana tympani can easily be confirmed by the aniline color, which is especially marked at the anterior portion of the drumhead.*

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* For the observation that a fluid colored with pure aniline can be injected in the above manner without fear and danger, I am indebted to one of my students, who, while practicing the use of the tympanic catheter one day, by mistake, filled it with a weak solution of aniline. The case caused me a great deal of anxiety, but it passed off without any reaction.

During the years that I have been using warm soda lotions for the nasal douche, I have not observed any unpleasant symptoms of inflammation after the douche, if the patients conducted themselves according to prescribed rules.

My suggestion, therefore, is to abandon the salt water and to try a weak solution of soda instead.*

I have no doubt but that the occurrence of otitis media after the use of the nasal douche depends as much on the state of the mucous membrane of the naso-pharyngeal space and the Eustachian tube as on the state of the tympanic cavity. Almost all aural surgeons will agree with me that injections into the naso-pharyngeal space may be made without danger in case of suppurative otitis with perforation of the membrana tympani. The fluid injected through the nostril passes through the aperture in the membrana tympani, and escapes through the external meatus; even when salt water had been used, I have never observed a reactive otitis media under such conditions, provided the patient had guarded himself against taking cold by plugging the external meatus.

On the other hand, the nasal douche becomes a serious matter if the mucous membranes are in a state of increased irritability or sub-acute inflammation, as, for instance, if a naso-pharyngeal catarrh is just developing. At such times the irritation caused by the nasal douche is certain to aggravate the inflammatory state of the mucous membrane, and the slightest cold will incite a violent inflammation of the middle ear; because the mucous membrane of the Eustachian tube and tympanic cavity readily participates in the inflammatory actions of the naso-pharyngeal space.

Once, while suffering from a cold in my head, I demonstrated on my own person, the use of the nasal douche. I am certain that no fluid entered the tympanic cavity—a fact easily decided by an expert, who, from daily experiments, is familiar with the sensations in the ear caused by the entrance of fluids, introduction of a bougie, etc.

Nor did I experience anything directly after the injection save a burning sensation in the region of the orifice of the right Eustachian

* The solution may be strong enough to give the fluid a decided alkaline taste, about five Grams to 100.

tube. Several hours later deglutition became unpleasant, and I felt an increased warmth and burning sensation in the middle ear. Violent throbbing in the ear supervened and the attempt to blow my nose caused a painful tension of the membrana tympani and the crackling of bubbles of mucous. By keeping the ear warm and plugged, I felt relieved, and all threatening symptoms disappeared, after a day's rest and quiet. But I am convinced, had I neglected these precautionary measures, the irritation would have developed into a violent otitis media, *although the fluid of the nasal douche had not entered the middle ear.*

The symptoms of acute otitis do not follow directly the use of the douche, but appear after an interval of from 4 to 10 hours, after other noxious influences have acted upon the patient. The douche itself simply increases the disposition of the mucous membrane to inflammatory action, so that the supervention of any irritation (as overheating, excitement, cold, etc.) suffices to excite the inflammation. In consideration of this *increased liability* to otistis media the patient should receive strict instruction regarding his behavior after the use of injections into the naso-pharyngeal space. Especially if the patient experiences the slightest feeling of discomfort in the ear immediately after the douche, he must be enjoined to plug and cover the ear, avoid all talking, rest, and above all, to remain at home.*

It has also been mentioned by other writers that the entrance of fluid into the middle ear depends materially on the patient's correct behavior during the use of the douche. He must not use it until he can breathe quietly: he must not speak or swallow, and if the desire for swallowing becomes uncontrolable, he must stop the douche at once. The head must be held perfectly straight, neither bent backwards nor inclined forwards, because in the latter position the injected fluid is likely to get in the frontal sinus. He must not blow his nose directly after the douche, lest in so doing the fluid and mucous which have been gathered at the entrance of the Eustachian tube, be forced on into the tympanic cavity. It is important also, as already mentioned

* A careful scrutiny of the published reports on otitis after nasal douche will reveal the fact that some patients were suffering from an attack of coryza at the time, and others exposed themselves carelessly to wind and weather immediately after use of the douche.

by me, to inject the water through the less pervious nostril, so that the return of the water through the other nostril is unimpeded. Fraenkel's suggestion to pronounce the vowel u during the douche is particularly applicable where a wide tuba and an insufficient contraction of the levator palati muscle favor the entrance of fluid into the tube.

But all these points are of less importance compared with the fact, proven by experience and experiments, that the *quality* of the fluid used in nasal douches is the principal agent which determines the occurrence or non-occurrence of otitis media. I am firmly convinced that my colleagues will have no more unpleasant experience with the nasal douche if they use warm solutions of pure carbonate of soda instead of salt water, and at the same time pay more attention to the observation of all the other precautions.

We take pleasure in reproducing, upon another page, the excellent letter of Dr. T. K. Cruse to the *N. Y. Medical Record*, (and published in that journal August 10, 1878) upon the subject of medical education in France. Our readers will bear witness to the fact that the editorial and many other pages of the CHICAGO MEDICAL JOURNAL AND EXAMINER have faithfully depicted to the profession the glaring vices of the American system of "educating" medical men, and of appointing them afterward to every manner of official position in colleges, hospitals and the service of cities and States. Dr. Cruse's letter from Paris is such an apt reminder of much that we have said, that we feel glad to publish it in full. In doing this we make an exception to the rule that has been maintained strictly thus far in the conduct of this journal, a rule which has led us to rely upon original work for presentation to our readers.

Correspondence.

MEDICAL MEN AND MATTERS AT VIENNA.

[From our Foreign Correspondent.]

During the past winter I have been accustomed to meet in the streets of Vienna, at the same hour of the day, and nearly at the same place, two old gentlemen walking arm in arm, one of them quite short of stature, very lame, and bent with years, having nothing very remarkable in his appearance, except that his great fur coat was of a finer quality than one sees generally worn by those who go on foot in the streets of this city.

Afterwards, when I went on Friday evenings to the meetings of the "Wiener Gesellschaft der Aertze," I found this little old man occupying what appeared to be a seat of honor at a table in the centre of the room. Asking a brother physician to give me the names of the men who were seated around this table, I was greatly surprised to learn that this diminutive little man was none other than the great Skoda.

Although he never took any part in the discussions of the society, he was always present, and seemed to be an attentive listener.

Those who claim to be able to recognize qualities of mind by the size and shape of the human skull, or by the general outlines of a man's countenance, would certainly find Prof. Skoda a profound puzzle, for his appearance is anything but intellectual.

What the future may develop in the advancement of physical diagnosis we are unable to surmise, but it is not too much to say that Prof. Skoda has given this branch of medicine an impetus far exceeding anything that has been accomplished by any other

person of this century, and that his name will live in all future time as one of the great lights of our profession.

He is now about 80 years of age. He resigned his professorship in 1871, retiring on his pension of $2,000 per year.

At this writing he is confined to the house by a more than usually severe attack of the gout, and fears are entertained that he will not long survive.

Prof. Bamberger, who succeeded Prof. Skoda, is about 45 years of age, wears his hair long, has a large, massive head, and looks not unlike the Henry Ward Beecher of twenty years ago. In the department of internal medicine he is perhaps the greatest man in Austria. His treatment is almost entirely expectant.

After listening to his lectures for some time, and hearing but little said of any therapeutical measures, I asked a German physician why Prof. Bamberger did not tell us something about treatment.

The reply was that physical diagnosis was his only forte; that if he encountered a case in the diagnosis of which there was doubt, his great fear was that the patient might before his death pass from under his observation, and that he might be unable to clear up the mystery by a post-mortem examination.

Prof. Duchek, although perhaps not so widely known as Prof. Bamberger, is far the better clinical teacher, and it is from him that one gets most of the practical hints in therapeutics that are to be obtained here.

In the general résumé that he gave at the end of the winter semester, of his plan of treatment, he began by laying down the following maxim:

"Give no medicines that will materially disturb the functions of life in your patient."

He said further that in the early years of his practice, he had used a wide range of remedies, and was ever ready to make trial of all the new and much-vaunted preparations that were brought forward, but having been almost invariably disappointed in their use, he had now settled down to the employment of about one dozen remedies, seldom giving any others.

Of these, the principal were quinia, digitalis, iodide and bromide of potassium, opiates, the salicylates, the acetate of

ammonia, the mineral acids, ipecac, castor oil, the saline cathartics, and *occasionally* calomel. He never uses either aconite or veratrum.

He believes that the influence that these last remedies exert to lessen the muscular force of the heart, as well as the blood pressure in the arteries and veins, is, in the vast majority of cases of febrile and inflammatory disease in which they are prescribed, absolutely *injurious*.

Among the many patients I have seen treated in the Allgemeine-Krankenhaus, I have never seen a single cantharides blister used.

The poultices that one sees everywhere and in all forms in Paris, are not used here, either in the medical or surgical wards. The " Umschläge " or wet compress takes its place.

I have seen a statement made by a physician before a medical society in America, to the effect that ergot was here generally given to women in labor just at the time or a little before the child is expelled. This statement is only true *now* as far as Prof. Späth's wards are concerned, while both Carl and Gustav Braun never give ergot *before* the expulsion of the fœtus, and never give it *afterwards* unless flooding occurs, that cold externally and pressure will not control.

In fact with Carl Braun no considerable time is lost in even waiting for the effects of ergot in cases of severe post partum hœmorrhage, but the intra-uterine injection of an astringent preparation of iron is resorted to at once.

Prof. Rokitansky,* who through his researches in pathological anatomy is perhaps the most widely known of all the men connected with this school, resigned his chair in 1875, and was succeeded by Prof. Heschl, formerly of Gratz. He presided during the winter for a month, at the meetings of the " Gesellschaft der Aerzte," and often took an active part in the discussion of subjects that came up before that body. Prof. Stricker read a paper one evening on the localization of the different faculties of the mind in different sections of the brain, and, during its debate, Prof. Rokitansky gave utterance to doctrines of a materialistic

*Readers of this journal will remember that our last issue contained the news of Prof. Rokitansky's death.—Ed.

character, that would seriously have jeopardized his standing as a scientific man, and more especially as a teacher, had they been enunciated by any one occupying his position, on the other side of the Atlantic. In brief, he said that to him, it was as reasonable to suppose that every human being was possessed of an infinite number of immortal souls, as to suppose that he had only one. Every separate cell that the brain contained might as well be considered a small soul, as to aggregate them into one mass, and construct out of the whole one great immortal part.

He believed that the immortal part of man was the same as the immortal part of a match. When you burn the latter, carbonic acid remains. After death our bodies undergo a slower form of combustion, and the carbonic acid that is the result of this process, never is or can be destroyed. Prof. Rokitansky is a man of large frame, with a noble, intellectually-shaped head, and is apparently in robust health.

All who hold professorships in this school have the privilege of resigning at the age of 70, and drawing their full pay, $2,000 per annum, for the remainder of their lives; and it is perhaps due to this fact that we no longer have him as a teacher.

Prof. Billroth came here from Zurich in 1867. Through his work on surgical pathology, he has achieved a world-wide fame; consequently students and physicians who resort to Vienna as a medical center, come with high hopes of what they will be able to learn from him as a teacher, but I have to see the first man who has not been disappointed in these expectations.

He is a good illustration of the error that is often committed in the selection of men to fill the chairs in the German medical schools.

Having achieved eminence by original investigation in some department of medical science, the inference is that he is qualified to teach the particular branch on which he has been able to write with such satisfaction to the profession at large; yet as a teacher, he proves, perhaps, an entire failure. The material at Prof. Billroth's command is almost unlimited; as an operator he is cool and skillful; at his clinic you can see (if his eight assistants do not shut off your view), some of the most difficult opera-

tions in surgery, yet after all is said and done, he gives little satisfaction as an instructor of students.

Prof. Stellwag, the author of the well-known work on diseases of the eye, is a fluent lecturer, and relates an anecdote in a manner that often "brings down" the house with roars of laughter.

Though so well-known as a writer, he occupies a position as an operator and practical man, second to that of Prof. Arlt. I am told that Prof. Stellwag never achieved any considerable reputation as a practical oculist, and but for his professorship and the revenue from the sale of his book, he would, in a financial point of view, be scarcely considered successful.

Prof. Hebra, the father of modern dermatology, is about sixty-five years of age, rather short in stature, heavily built, and a genuine type of the German character. His class is composed almost exclusively of German students, the foreigners who come here preferring the shorter courses on skin diseases given by Profs. Neumann and Kaposi.

Prof. Hebra, like many other great men, though possessing a large head, has not a very tender heart. I saw him one day scrape away with a sharp spoon, the third part of a poor fellow's nose who had lupus.

As no anæsthetic was given, the man yelled most vociferously. When the doctor had finished, he asked the patient what his occupation was, and being answered that he was a shoemaker, the Prof. remarked, that that was a pity, for a man with such a magnificent voice as his, should have either been a singing master or a jackass. Prof. Hebra, as the reader is perhaps aware, does not give arsenic or other supposed specific medicines in diseases of the skin.

It is safe to say that he does not give medicines of *any kind* to one patient in twenty whom he treats for cutaneous disease, but depends entirely upon local treatment.

During the summer course we have had a successful Cæsarean section performed by Prof. Carl Braun. The subject, upon whom it was done, is a diminutive little woman, who in her childhood had suffered from rachitis, and whose pelvis in its antero-posterior diameter only measured 2¼ inches.

She had been in the hospital and her case was under observa-

tion for six weeks before the expiration of the regular term of pregnancy.

The patient was carefully watched, and when the first premonitary symptoms of labor came on, she was anæsthetized, and the operation done in the following manner:

First the abdomen was laid open in the median line from near the symphysis pubis to within three inches of the ensiform cartilage. The womb was now opened, the child and after-birth removed, great care being taken that no blood or amniotic fluid passed into the cavity of the peritoneum. The child, a girl weighing 6¾ lbs. was delivered alive.

Despite the long incision in the walls of the uterus, as soon as this organ was freed of its contents it contracted down with such force that the hæmorrhage was inconsiderable. The large chain of an écraseur was now passed down as low on the womb as could be done without bringing it to bear upon the bladder or ureters, and finally tightened so as to compress completely all the blood-vessels of that organ. The entire fundus uteri was next amputated within an inch and a half of the border of the chain.

The écraseur was left upon the stump, and brought outside of the peritoneal cavity, and the abdominal walls closed around it after the manner of the extra-abdominal management of the pedicle in cases of ovariotomy, the écraseur acting as a clamp. Two days later the stump showed some signs of bleeding, and a Spencer Wells clamp was applied over the écraseur. Four days after the operation, the patient exhibited symptoms of a partial peritonitis, which continued with a slight fever for a week longer. Excepting this slight disturbance, the patient had no bad symptoms, and made a good recovery. This, I believe, is Prof. Braun's fourth operation, but his only successful one. The removal of the entire body of the womb in connection with this operation now constitutes the exclusive mode of proceeding in cases of this kind here in Vienna.

In fact all cases that have been otherwise managed during this century have died.

Dr. Marion Sims spent some time in Vienna during the past winter, the object of his visit being, as I am informed, to collect

material for a new forthcoming edition of his work on uterine surgery.

While here, the doctor was of course considerably lionized, and invited to perform gynæcological operations. Among these he did three for the removal of cancerous portions of the womb by a method called by the Germans the "*Trichterförmiche Excision*," which consists in cutting away with the scissors a funnel-shaped portion of the crevix uteri, extending, when necessary for the removal of the diseased tissue, into the body of the womb itself.

In fact, as done by Carl Braun, the procedure consists in removing the whole lower portion of the muscular tissue of the uterus, close upon the edge of the peritoneum.

Dr. Sims' patients operated upon here, all died of peritonitis within ten days of the operation. I remarked to the professor who related the facts to me, that I supposed that they selected desperate cases for Dr. Sims to operate upon. He replied that although the cases were bad ones, that did not alter the fact that they had died of the direct effects of the operation.

Dr. Bozeman spent two months here in 1876, and I find a pretty general impression among the gynæcologists of Vienna, that he is the more skilled operator of the two.

In the rivalry between these two eminent men, many here in Vienna think that Dr. Sims has carried off more than his legitimate share of the professional laurels.

American female physicians, whom we meet at every turn in Europe, have formerly been able to get private instruction in many special departments of medicine, from the docents and assistants here. This winter, unfortunately for them and for those who may come after them, we have had several of the Mary Walker type, who were not contented with any privileges short of those accorded to men, and urged their claims with such pertinacity, that the faculty were impelled to take action in the matter, which has resulted in excluding them entirely in future from everything except the lectures of Prof. Gustav Braun. His course is delivered to midwives (Hebammen), who are instructed in the management of natural labors, and emergencies that may arise before a physician can be summoned. His class this winter numbers about 70, and is mostly made up of peasant girls having

a fair rudimentary education. The term of instruction varies from six to nine months. Foreign female physicians can enter this class and receive instructions with them. From 10 to 15 deliveries occur in his wards every 24 hours. His class have an opportunity to *witness* all the obstetrical operations.

The course is a very good one, but does not include everything that a lady who aspires to an eminent position in her profession would want to learn. For the benefit of the many who are in the habit of coming here, let me say that this is absolutely *all* that they can secure in Vienna.

Among the sixty or seventy American medical students and physicians who have been here attending lectures during the past year, about fifteen have been homœopathists.

We have here also a homœopathic hospital, from which has been sent out to the world some of those stunning statistics comparing the old school results of treatment at the Allgemeinen Krankenhaus with that obtained at the former institution. I have visited this hospital, and think I can explain all the difference in mortality that the friends of this exclusivism in medicine claim for it over its more aged competitor.

First, their hospital is a new one with large airy wards, and only contains fifty beds. Portions of the Allgemeinen Krankenhaus were built nearly a century ago; many of its wards have low ceilings, and it contains 3,000 beds. Without going any further, this will account for all the difference in mortality that they claim.

Then, again, they have no man on the staff of the homœopathic hospital who has any wide reputation as a surgeon, while to Billroth is sent from all Western Europe the most desperate cases for surgical treatment; cases in fact that the ordinary man dare not handle, and as a result, of course, many of them die after his operations. Among these homœopathists is one ex-president and one ex-vice-president of the Massachusetts State Homœopathic Society.

None of them ever go to this homœopathic hospital for instruction. They are much better men than the average of their school that one meets at home, and as most of them have taken special courses in physical diagnoses (in which they are generally wonderfully deficient), they are going to be difficult men to encounter, for those who come in competition with them in the future.

There has been some sickness among them during the past winter, and as far as my knowledge extends, every one of them, with a single exception, employed an old school physician.

While in Rome this spring, the ex-vice-president was taken with a severe attack of cholera morbus. He called me at 4 o'clock a. m., and I found him bathed in a cold sweat with violent cramping of the muscles of the lower extremities and discharging immensely large stools of a rice water character.

After I had examined him I said: "Doctor, there are three of our traveling companions in the next room who are homœopathic physicians, and as I do not practice that branch of medicine, you had better call one of *them*."

He replied, "I care nothing about homœopathy *now;* I am going to die if I am not soon relieved; treat me as you would any one of your lay patients."

While selecting some instruments and other articles for a physicians' outfit in company with the ex-president, I bought a steel engraving of the medical faculty here, grouped together. I said, "Dr. C. are you not going to buy this picture also for your office?"

"Not I," he replied. "It would not look well for me to have my office decorated with the likenesses of a set of old school professors."

Yet this man will cross the Atlantic and spend months in receiving instruction from these very men whom he professes to disown, as soon as he turns his back on this city. "Consistency, thou art a jewel." W. S. CALDWELL.

VIENNA, Austria, July 15, 1878.

[*From our Foreign Correspondent.*]

No. I.

SURGERY IN MUNICH; PROF. NUSSBAUM; EXTIRPATION OF THYROID GLAND.

MUENCHEN, July 8, 1878.

Editors Chicago Medical Journal and Examiner:

Soon after my arrival in the city I called upon Prof. D. von Nussbaum to whom I had a letter of introduction. He received me

with the greatest courtesy and has improved every opportunity to make my visit a profitable one. He is now the most prominent and most influential member of the medical faculty. He is about 50 years of age, medium sized and has fine features, with an expression of superior intelligence. He is not what might be called an orator, but a good lecturer, using plain language without the many technical expressions so common among German teachers. He gives a surgical clinic every day from 8 to 9 a. m. in the general hospital. He is an enthusiastic admirer of antiseptic surgery. With the exception of Lister, antiseptic surgery owes him the greatest debt of gratitude for its general introduction all through the German empire. His operations, with their results border almost upon the miraculous. Last week I witnessed an operation for the extirpation of a large sarcomatous tumor, situated in the dorsal region between and about the centre of the scapulae. The patient was a man about 50 years of age. He had been operated upon three times before; for the first time about 15 years ago, and the last time five years ago, the tumor recurring at variable times in the cicatrix. The patient is anæmic and somewhat emaciated, but no glandular infection can be ascertained. The tumor is somewhat elongated from above downwards, with several knotty red elevations near its superior border. It is apparently intimately connected with the deep fascia but not with the bones. Chloroform was administered. The whole operation was performed under a large spray from two spray producers. The skin over the tumor was included by two elliptical incisions. As the tumor was found to be very vascular and numerous large vessels passing into its interior, the base was divided into at least 25 pedicles with the ordinary dressing forceps, and each successively ligated with catgut and cut with the scissors. Very little blood was lost during the whole operation. The operator placed great stress on the importance of preventing great loss of blood in the aged, as it was very liable to be followed by serious if not fatal prostration. In closing the wound it was found that the skin had retracted to such an extent that proceeding in the ordinary manner the tension would be too great and would prevent primary union, a result so much to be desired in this case. To relieve the tension of the wound he applied what

he terms the "Entspannungs-Naht." A large silver wire carrying needle is introduced about two inches from the margin through the whole thickness, and is brought out at about the same distance on the opposite side, carrying a stout silver wire; to the ends of the silver wire a disk of lead the size of a quarter is fastened. Three such sutures relieved the tension and rendered the accurate closure of the wound with catgut sutures possible.

A drainage tube was placed in the bottom of the wound and cut at both ends on a level with the surface. The wound was dressed according to Lister's directions, being covered by thin antiseptic silk, eight layers of moist antiseptic gauze, eight layers of dry gauze, with a layer of Mackintosh cloth between the last two layers; around the neck and lower part of chest the irregular spaces were filled with salicylic cotton, and the whole retained by a gauze roller. During his remarks, after the operation, the professor stated that he had repeatedly employed as many ligatures as in this case, and had never found them to cause suppuration or interfere with primary union. They do not act as foreign bodies, but are absorbed.

In speaking of the nature of the tumor he said he belonged to that class of pathologists who believe that benign tumors may after a great many years, assume a malignant type. To-day I was present at his eleventh operation for knock-knee, which consisted in sawing off the internal condyle of the femur subcutaneously, but as I wish not to weary your readers, I will reserve the report of this case for my next communication.

Very respectfully,

N. SENN.

No. II.

MUNICH, July 15, 1878.

Editors Medical Examiner and Journal:

In my last letter I promised to describe an operation for knock-knee performed by Prof. von Nussbaum July 7. The deformity depends essentially upon an excessive development of the internal condyle of the femur. The inner portion of the articular surface of the femur being lower than when the rela-

tions of the condyles are normal, the leg is turned outwards proportionate to the extent of abnormal projection of the internal condyle. This fact led Oxdorn to separate the internal condyle of the femur subcutaneously, sliding it upwards; in this manner correcting the deformity. The patient was a young man about 30 years of age. The deformity had made its appearance during his early youth. Only one side was affected. The abduction of the leg was so marked as to interfere seriously in locomotion. A small incision was made about eight centimeters above the joint, and over the inner margin of the rectus femoris muscle. A large tenotomy knife was now introduced beneath the skin along the inter-condyloid fossa to the inner margin of the tendon of the patella, and by dividing the soft parts down to the bone a tunnel was made for the saw. The saw used was Adam's, with a cutting edge two inches in length, blunt at the end, and a smooth shaft connecting it with a large firm handle. It was introduced along the tunnel in the same direction, and the bone divided from before backwards sufficiently until the bridge left could be fractured by forcible adduction of the leg; this took place with an audible snap, when the leg could be easily placed in its natural axis. It is important not to complete the section with the saw, as the artery beneath might be injured, but to complete the operation by forcible manipulation. The opening in the skin was accurately closed with catgut sutures. Very little hæmorrhage took place. A well-padded splint was applied along the outer side of the leg and thigh, retained by a roller. The whole operation was performed under the antiseptic spray, and the wound covered by an antiseptic dressing. Directions were given that passive motion should be made in a few days. Prof. von Nussbaum has performed this operation eleven times; in all the result was perfect, straight limb without anchylosis; in none did suppuration take place. When we consider the utter inefficiency of all methods of treatment previously recommended for the correction of this deformity in advanced cases, and at the same time may be confident of the harmlessness of the procedure, we gladly welcome this operation as one of the greatest triumphs of orthopedic surgery.

Extirpation of Thyroid Gland.

June 10, I received a private invitation to witness an operation for extirpation of a large goitre at his private hospital, located Nymphenburger strasse 28. The patient was Baroness X., about 50 years of age. She had been suffering from enlargement of the thyroid gland for many years. The suffering from the pressure of the tumor has gradually increased, until at present she is subject to frequent attacks of asphyxia. She is anxious to have the operation performed, even if attended with immediate risk to life, as it is the only means to afford possible relief. The tumor is quite firm, the size of a large fist, and located over the center of the trachea. Chloroform was administered by staff surgeon Bratsch. The head was thrown backwards by placing a pillow under the neck. An incision was made in the median line from the upper margin of the tumor to near the sternum; on the right side another incision was connected with this, and carried along the upper margin of the clavicle to the external jugular vein. The skin was separated from the tumor, and a number of small veins ligated with catgut. On the surface of the tumor large veins were seen, some the size of the little finger, running in all directions.

The tumor was separated from the structures around and beneath it by making small pedicles with the dressing forceps, drawing through the openings made with the forceps, catgut ligatures, and after tying them, cutting the intervening portion with the scissors. Notwithstanding the great care exercised to prevent hæmorrhage, it at times became alarming, from slipping of the ligatures on the surface of the tumor, and from division of vessels not included in the ligature. Several times the pulse became imperceptible, and respiration almost suspended, but the greatest difficulty met with was at the base of the tumor, where it was intimately connected with the larynx and trachea; the walls of the larynx and trachea had become extremely thin from the long continued pressure of the tumor, and in attempting to separate it the trachea was opened, blood immediately entered, and respiration ceased. An elastic catheter was introduced into the trachea, and the blood withdrawn by the mouth of the operator; artificial respiration made by compressing the thorax.

As soon as respiration became re-established, a double tracheotomy tube was introduced, and the operation completed. The operation lasted over an hour, and but for the presence of mind of the operator, and his great courage, as well as the skillful assistance rendered by such men as Bratsch, Lindpainter and Messer, the patient would certainly have died on the table. Forty-six catgut ligatures were used. After all hæmorrhage had ceased, the wounds were closed, and the trachea tube secured with a tape tied around the neck. As a dressing, borax lint was used. The patient rallied after application of a strong current of electricity; respiration became regular. She was placed in bed, and external heat applied. Nourishment was introduced by means of a stomach tube.

The patient died 24 hours after operation.

Yours truly,

N. SENN.

PROFESSIONAL ADVERTISEMENTS.

To the Chicago Medical Journal and Examiner:

The subject of personal advertising has recently been brought prominently to the notice of the profession. The methods, both direct and indirect, of accomplishing this are often observed, and, if carefully collated, would afford material for an interesting, possibly an instructive article. To arrange to be called out of a congregation; to drive in great haste, as if pressed with business, though perhaps sadly lacking patients; and in many other ways to convey the impression of being overwhelmed with professional work, and to appear as if possessed of a hidden reserve of knowledge and skill, have been practiced until the appliance of these devices almost takes the rank of an established art. Another method is to advertise through the columns of the secular press, or in handbills and circulars, that may be easily disseminated. In this practice a large class that the profession look upon as quacks, assume no disguise, but boldly proclaim their skill and acquirements. This method, however, is condemned by the rec-

ognized profession, and is prohibited by its code of ethics. But the ingenuity of man has always been able to devise means to evade the statutes, both of law and ethics. When the State of Maine made the selling of a glass of whisky to a thirsty sufferer a penal offense, places of business were immediately opened where a striped pig was exhibited for a consideration, and the delighted beholder went away gratuitously refreshed with an exhilarating draught. Druggists, who are conscious of the indelicacy of too directly advertising themselves, select some special article which they advertise with great diligence, the gist of the advertisement being like that of a lady's letter, in the postscript—for, at its close, the druggist's card holds a conspicuous place. There are suspicions that some members of the profession practice similar arts.

I may cite, as an example of what may justify these suspicions, the headings of certain certificates recently widely disseminated. These headings recite the names of the physicians who give the certificates, the professorships they hold in various colleges, the hospitals with which they are connected, the learned societies of which they are members, and in some cases even descend to the minutiæ of the street and number of their residence.

To these headings are attached certificates, recommending the use of certain mineral waters. This reproach rested on a number of well known physicians of the city of New York. The JOURNAL AND EXAMINER, animadverting on this occurrence at the time, said: "It is a satisfaction to us, that at no time have we had occasion to blush for any such flagrant violation of professional propriety in the West." But "let not him that girdeth on his harness boast himself as he that putteth it off." Close on the heels of this self-congratulation, the profession of Chicago has been made to feel the crimson in its cheek. An advertisement appears day after day in the most widely circulated papers of Chicago, signed by more than a dozen well-known physicians of the city, who have united in the Herculean task of informing a distressed and waiting public, of whom it may purchase a pair of spectacles. By a singular accident, most of these signers are the happy possessors of long titles; and these are carefully

embodied in the advertisement. It is Professor this, or Professor that, in this or that medical college; or an attendant in some hospital. A single name comes before the public in the nakedness of a simple M. D., and with its surroundings in the advertisement, it appears like one bald head amid a group, of which all others are adorned with a profusion of hyperian locks. Few can be so blind as not to see that such advertisements are as much in the interest of the "Professors" whose names are embraced in them, as of the innocent draught of mineral water, or bit of pebble glass recommended. This is not unlike the Arab cry of the street venders of small wares. "In the name of the Prophet—figs." In the name of the "Professors"—spectacles. Such arts lack even the merit of novelty. I presume the metrorrhagic woman of the Scriptures—"which had an issue of blood twelve years, and had suffered many things of many physicians, and had spent all she had, and was nothing better, but rather grew worse," had selected in succession her many medical attendants, from having seen their advertisements in the daily prints, and been in this manner informed that each of them had the degree of A. M., M. D. and L.L. D., and was Professor in the Oriental Medical College at Jerusalem; or held a position in some hospital there established. These oriental Professors might have denied that this was an individual advertisement of their attainments, and thus a violation of the code; but they were certainly conscious that only a dull patient would fail to reason that high position is presumptive evidence of superior skill. Possibly professional advertising is now practiced as successfully as ever before; but it is sadly lacking in that display of genius which once gave it almost an air of respectability. To make this apparent we quote from some advertisements of Martin Van Butchell, a physician who practiced in London more than a century since:

Here is a recommendation of the Balm of Life, published in the *World*, Saturday, August 30, 1791.

"He that doeth well, cometh to the light."

"Old People, (efpecially Profeffors of the healing art; and fuch of their friends, as are not fond of inteftine medicines) are refpectfully informed, that MARTIN VAN BUTCHELL. (of Mount-ftreet, Grofvenor-fquare), Surgeon-Dentift, and Patentee for Spring-Bands, has invented and (himfelf) prepared,

a neat, clean, pleafant-fmelling, outward SPECIFIC, for BLEEDING FUNGUS', INFLAMMATIONS, SUPPURATIONS, CARBUNCLES, ULCERATIONS, and MORTIFICATIONS!

"JOHN HUNTER, Esq. F. R. S. (of Leicefter-fquare), Surgeon-Extraordinary to the King, and Surgeon-general to his Majetfy's Forces, had a fmall bottle of it prefented to him very lately:—when he faw two Patients, and the faid SPECIFIC, moft readily applied (to their bad parts), with much fuccefs!

This—is not like any extract of Lead;—
(That palfy-producing,—noxious Metal:—)
Nor,—the King's-Evil Roufer—Mercury:—
(Dire,—predifpofing Caufe—of many Woes.—)
Nor,—Antimony;—often dangerous:—
(Nor,—the Cauftick,—Lapis Infernalis:—)
Nor,—that injurious poifon,—Arfenick:—
(Nor,—Hemlock; which, too long amus'd weak minds)
But,—ESSENCE from fine Gold;—
Sweet BALM of LIFE!
"The ROYAL COLLEGE of PHYSICIANS,
And the
Corporation of SURGEONS of London,
(Thofe proper GUARDIANS of infirm bodies,)

May fee—if they pleafe—fuch as Mr. JOHN HUNTER has with pleafure feen: on giving notice to

MARTIN VAN BUTCHELL,
"Who fends forth words of truth—and foberness."
☞ So many die—wanting the BALM of LIFE;
Aged folk—fhould ever have it by them!—
And fo ought the young:—as a PREVENTIVE,
Of what might end in—
Sad PUTRIDITY.——

Obferve,—
Strong Drinks—Make Weaknefs,—and are bad
For them that ufe
VAN BUTCHELL's Balm of Life!

The two following are designed to advertise the doctor rather than his medicines:

BY the GRACE of GOD.
WE—CURE—SAD—TOOTH—ACH:
In TWENTY minutes:—Without DRAWING It:
LIKEWISE, BAD RUPTURES:—VERY SPEEDILY:
With FIT Bandages:—THAT do NOT Torture.
MARTIN VAN-BUTCHELL:
SURGEON for the TEETH:—More than THIRTY Years,
"THEY—THAT—SEEK—SHALL—FIND."
TUMORS—ON—FACES:
Gums,—NECKS,—and ARMS of—THE faireft LADIES:

And FAIR Gentle-MEN:
STYS—UPON—EYE-LIDS:
PARALYTIC—Strokes:—WEAKNESSES—of—JOINTS:
BIG—VEINS—IN—MAN's—LEGS:
FUNDAMENTAL-ILLS:—PROLAPSUS-ANI:
WENS and CARBUNCLES:
SWELLINGS—near—the—GROIN:—FISTULÆ-and-PILES:
CURED—WITHOUT—CUTTING;
Or SCARIFYING.

MARTIN VAN-BUTCHELL, from his Anatomical—Chemical—Experimental—Mechanical—Medical—Philofophical—Practical—and Surgical Knowledge, is depended on, as the trueft friend to fober people, forely afflicted—with faid fad complaints.

EMPERORS,—Princes,—DUKES, and—MARQUISES.
THE Great JOHN HUNTER * Taught ME to GET first:
So we do much good:—Curing FISTULÆ.
Without Confinement, Fomentation, Rifk:
Injection, Poltice, Cauftic, or cutting.
FEE is TWO per CENT.—On FIVE Years PROFIT:
☞All the money down:—Before I begin.
ANANIAS, FELL!—DEAD FOR KEEPING BACK!
MARTIN VAN-BUTCHELL.

* SURGEON EXTRAORDINARY TO THE KING:
And Surgeon General to HIS Forces.
THE—first MAGISTRATE
And other SINCERE—Lovers of this STATE
Are now informed—moft refpectfully
That fome years ago, MARTIN VAN BUTCHELL, had an Appointment to mee
(—At Lady HUNLOCH's Houfe, in Stratford-Place,—)
his able teacher, JOHN HUNTER, Efq.
Who overtook him in Grofvenor-fquare, and bade him get into his Chariot:
—foon as he was feated,
John, faid, "What Mifchief are you about now?"
Martin. 'Curing the King's-Evil.'
John. "I can't Cure the King's-Evil."
Martin. 'I know you can't Cure the King's Evil:—if you could Cure the 'King's-Evil, I fhould not trouble myfelf about the King's-Evil but I want 'to do,
'What you cannot do!'

John. "That is right.—Do you try to get firft. (—*We know nothing, com-'pared to what we are ignorant of*—) Make yourfelf of confequence, and then 'every body will make you of confequence; but if you don't make yourfelf 'of confequence, nobody elfe will.—I do affure you,—many are in very 'high efteem, and very full practice, that (—comparatively—) know no more 'about HEALING, than *Dray-Horfes*:—they have not POWERS.
"YOU—TRY—TO—BE—FIRST!"

These advertisements are classical, and make those of more recent origin seem "stale, flat and unprofitable." The study of Van Butchell may safely be commended to all who may be tempted to seek personal fame otherwise than by doing worthy work and communicating their observations to the profession through scientific channels.

It is not pleasant to feel obliged to criticise in this manner the acts of personal and professional friends, but the interests of the profession should always stand above personal considerations, and if our code is not to be maintained, we may as well disband all our organizations, and become, at once, professional guerrillas.

E. INGALS, M. D.

MILWAUKEE, August 20, 1878.

Editors Chicago Medical Journal and Examiner:

In the issue of your journal for November of last year, you took occasion to severely censure a number of prominent Eastern physicians for displaying their names and titles in advertisements of the Hunyadi Janos mineral waters. You justly denounced it as a violation of professional propriety which representative men certainly ought to be the most scrupulous in observing.

You concluded your criticism by saying: "It is a satisfaction to us that we at no time have had occasion to blush for any such flagrant violation of professional propriety in the West."

When I read this, I experienced the pride of being a Western physician. I imagined myself and my Western brethren standing on the high pedestal of professional integrity, from which we could look down upon the Eastern crowd toiling in the dust of newspaper notoriety.

But alas! My pedestal was built of perishable stuff, and erected on quicksand! To-day it lies on the ground, a heap of dust and imagination.

Scarcely six months had passed over the country, when physicians of the Western metropolis set an example of professional impropriety far more glaring and disgraceful than the public indorsement of a mineral water by our Eastern brethren.

I allude to the advertisement of an optician, which during the past month was published on the first page of the Chicago daily and Sunday papers, and paraded the names and titles of eighteen professors in the medical colleges of Chicago as indorsers.

The Eastern physicians can say at least that they recommended a *genuine* article, which really *is* that which it claims to be.

They could form their opinion at least from experience, and an intimate knowledge of the article they recommended.

But what about the article indorsed by eighteen Chicago medical professors? Did they inquire into the previous history of this case; did they ascertain whether he was a competent, honest-dealing optician, or an impostor? It would also be pleasing to know how these eighteen professors, among whom there is not a single ophthalmic surgeon, so suddenly obtained the ability to pass an opinion on spectacles and their proper adaptation, which they generally admit they know nothing about.

To a clear minded physician whose eye can penetrate through the gauzy garment of a "professor," to the true inwardness of the knowledge and ability of a man, these indorsers appear to have made themselves ridiculous because they did not know what they were talking about, and have disgraced their names and colleges if the recommended optician should sooner or later be unmasked as a shrewd unscrupulous pretender.

I was accustomed to look to the professors as the representative men of our profession, and believed them to be the corner stones of the code of ethics. I always thought they were unusually pedantic in their professional acts lest they might soil the purity of professional dignity; and exceedingly reluctant to have their names and titles appear in daily newspapers lest somebody might suspect them of a desire to advertise themselves. I, therefore, was greatly surprised by this exhibition of bad taste, ill judgment, and imprudence on the part of our professors.

Your most sorrowful brother,

OPTIC.

Reviews and Book Notices.

ETUDE EXPERIMENTALE ET COMPARÉE SUR L'ARSENIC ET L'HUILE DE FOIE DE MORUE DANS LE TRAITEMENT DE LA PHTHISIE PULMONAIRE. Par Joanny Rendu, Paris, G. Masson, 1878.

EXPERIMENTAL AND COMPARATIVE STUDY OF ARSENIC AND COD LIVER OIL IN PHTHISIS PULMONALIS. By Joanny Rendu.

This is a pamphlet of 48 octavo pages of text and ten plates, eight of which represent the curves of temperature, sweat, diarrhœa, muscular force and weights of the patients, and two the thermometric tracings. The study was made in the *Hôtel-dieu* at Lyons, in 1877, the special object being to determine the relative values of arsenic and cod liver oil in the second and third stages of phthisis. The following are the author's conclusions:

I. *Practical Conclusions.*—To determine which of the two remedies is preferable in the treatment of phthisis, he took thirty-five patients in the 2d and 3d stages, and placed them at hazard in three classes: 1st, those placed under simple tonic treatment, otherwise called the expectant treatment; 2d, those treated with arsenic, and 3d, those with cod-liver oil. These patients were, for the most part, followed for two and a half or three months.

Every ten days their *exact* weight was taken, and the amount of their *muscular force* by the dynamometer. Note was also made of the degree of *sweating* and *diarrhœa*, and each day, morning and evening, the *rectal temperature* was taken. For various reasons it became necessary during the observation, to omit ten of these cases to avoid possible error. The remaining

twenty-five cases were divided into three classes, eight in the first, eleven in the second, and six in the third.

Of the eight patients subjected to the expectant treatment, six lost in weight and two gained; of the eleven treated by arsenic, ten lost in weight and only one gained; of the six treated by cod liver oil, two lost in weight and four gained.

The degree of gain or loss by these three methods of treatment may be appreciated in the following manner, the duration of the experiments and the weight of the patients being supposed the same for the three classes, we find:

By the expectant plan a loss of 4 k. 965 g. for 100 k. of patient.

By the arsenic treatment a loss of 4 k. 703 g. for 100 k. of patient.

By cod liver oil treatment, a *gain* of 2 k. 150 g. for 100 k. of patient.

Or rather by adding to this last series, as it is legitimate to do, *what has not been lost*, to what has been gained, we find by the use of cod liver oil a *real increase of more than 7 kilograms for 100 k. of the patient.* Arsenic gave only the results of the simple expectant plan. On the contrary, the patients who took cod liver oil, alone gained in weight and strength. The pulmonary lesion did not appear to be as happily influenced by the cod live oil, as the general state and the nutrition of the patient. The medicine has little or no effect when the pulmonary lesion is considerable.

II. *Scientific Conclusions.*—The comparative study of the curves of sweating, diarrhœa, temperature, weight and muscular force of the patients, leads to the following results:

There is constantly an inverse relation between the weight and the temperature.

The same inverse relation exists between the weight on the one side and the sweating and diarrhœa on the other side.

The weight and muscular force are in direct relation. When here is neither fever, sweating nor diarrhœa, the weight increases progressively in relation with the treatment followed, but this increase is much more rapid if the patient be not a consumptive.

If the medium temperature remains in the neighborhood of 38° without being accompanied by sweating or diarrhœa, the patient

may still keep up and remain so for some time; in any case he loses but little.

The increase of weight begins about fifteen days after the temperature has come down to the normal level.

There exists an inverse relation between the temperature, on one side, and the sweating and diarrhœa on the other; one may have these complications combined two by two, but they are not seen all three at once. L. W. C.

A Practical Treatise on Aural Surgery. By H. Macnaughton Jones, M. D., M. Ch., F. R. C. S., I. and Edin. Philadelphia: Lindsay & Blakiston. 1878. Chicago: Jansen, McClurg & Co.

Every now and then small books are forced upon the medical profession under the alluring title of "Practical Treatises," which pretend to furnish, in the most condensed form, a complete résumé of our present knowledge in this or that branch of medical science. They are a sort of condensed milk; yet unlike the latter they cannot be made palatable and digestible by dilution, but must be taken in the crude and indigestible state in which they are presented.

The "Practical Treatise" before us is no exception to the rule, nor does it give us a high opinion of the author's literary talent. It is composed without system and written with haste, leaving some of the most modest demands unsatisfied.

The author's apology for publishing this book is that which we find in all these practical treatises, "intended chiefly for the busy practitioner and student," and from this stand-point we shall examine his fabrication.

We believe that in a small compendium, wood-cuts should be reduced to the smallest possible number of absolutely necessary illustrations. But to ornament 172 small octavo pages with forty-five pictures of such instruments as nasal specula, syphon douche, nasal douche, syringes, etc., is a pictorial extravagance not in keeping with the modest space left for the text.

One hundred pages are devoted to the modes of examining the ear and the description of instruments. In this part the author's remarks are clear and to the point; and only his hasty writing

could make him commit this gross blunder, on page 33, of letting the triangular light spot of the membrana tympani begin at the *short* process, instead of at the extremity of the long process or handle of the hammer.

Only seventy-two pages are reserved for the consideration of the maladies of the ear. The eminently *practical* use the author of this "practical" treatise, undertook to make of this limited space, is manifested by the fact that ten pages are devoted to the description of "Othæmatoma," while only two pages are allowed for "Polypi!" And the commonest and practically most important aural diseases, the catarrhal affections of the middle ear and Eustachian tube, are disposed of on *five pages* (!) when nine pages could be given up for a quotation from a paper on "Deafmutism" which was read by Dr. Turnbull before the International Congress.

Another curious illustration of the author's peculiar idea respecting a "practical" book, may here be mentioned. On page 79 we find these remarks: "When and how are we to incise the membrane and make an artificial opening into the tympanum? This is just one of those disputed points which I determined to avoid dwelling on in this work, intending it as I do for practitioners whose minds should not, if possible, be burthened about operations which they are not likely to be called on to perform, and the decision as to the propriety of which involves a more lengthened and varied experience than is likely to fall to the lot of most surgeons." A few pages further on, the author has already forgotten this determination to avoid burdening the minds of practitioners "about operations which they are not likely to perform," etc., etc., for he devotes *thirteen pages* to "Tenotomy of the tensor tympani," although he looks upon it as a questionable operation, and acknowledges his total ignorance about it with more candor than grammatical finish: "I wish to remark that this is an operation the utility of which I have myself no practical experience. I have hesitated to practice tenotomy until more definite results are obtained from its performance, and the cases in which it is indicated are more clearly defined."

In view of the fact that America has produced three excellent text books on aural surgery by Roosa, Turnbull and Burnett, it

is difficult to understand how a leading American publisher could be found who would reproduce an inferior work like the one before us; for there is no valid reason for its existence. If a practitioner is too busy, or a student too lazy, to read one of our good and complete text books on Otology, he should never meddle with aural diseases, nor consent to practice on such cases with the diffuse knowledge to be gained from the reading of these small, "dime novel" volumes styled "Practical Treatises." F. C. H.

THE ATLANTIC ISLANDS AS RESORTS OF HEALTH AND PLEASURE. By S. G. W. Benjamin, author of "Contemporary Art in Europe," etc. Illustrated. New York: Harper Bros., 1878. Chicago: Jansen, McClurg & Co.

This book is a very attractive narration of the author's recent visit to the following islands of the North Atlantic: The Bahamas, the Azores, the Channel Islands, the Magdalen Islands, Maderia, Teneriffe, Newfoundland, the Bermudas, Belle Isle-en-mer, Prince Edward's Island, Isles of Shoals, Cape Breton Island the Isle of Wight.

An appendix furnishes, in the language and style of a guide-book, copious information regarding the attractions of each island for both invalids and sportsmen, sanitary statistics, means for reaching these resorts, and the hotels and expenses of living.

The book is very liberally illustrated and tastefully finished, and will be an entertaining lecture to every one. In those who have visited the Atlantic isles it will revive pleasant reminiscences; and those who have never been there, will receive such vivid impressions that they will be inclined to believe they have made the journey in reality. F. C. H.

PERSONAL APPEARANCE AND THE CULTURE OF BEAUTY, WITH HINTS AS TO CHARACTER. By T. S. Sozinskey, M. D. Ph. D. Philadelphia; pp. 196. Price, $1.50.

The book is one which commends itself as a work on hygiene, offering as a reward for the fulfillment of each and every law, the attainment, so far as nature's outlines will permit, of personal beauty, the outlines even being often amenable to improvement and correction, as measured by the standard of beauty. The

author gives the standard type of beauty, male and female, and gives the geometrical rule of procedure (Fechner, Dürer), on which nature operates in producing symmetry of form, as illustrated in art by Apollo and Venus.

Beauty being an improvable heritage, the author gives various suggestions relative to the cultivation of the various features, the forehead, eyebrows, eyes, nose, cheeks, chin, lips, teeth, lines, wrinkles, complexion and hair, and concludes with some sensible remarks on dress. A novel instrument is introduced whose use is to modify the growing infant's nose, called a nose machine. By it the unduly low-bridged nose is lifted up; and various tilts are corrected. There will exist a prejudice on the part of mothers to this invention, as it destroys much of the poetry in the sleeping cherub faces, to see clothes-pins attached to the little noses. But such prejudices should be subdued inasmuch as, according to Lavater, "A nose physiologically good is of unspeakable weight in the balance of physiognomy." Some observations are given on the import of features, enabling the observer to gain some glimpse of character, none of which are new. The book is fairly worth reading. S. F. B.

UROLOGICAL DICTIONARY, containing an explanation of numerous technical terms; the qualitative and quantitative methods in urinary investigations; the chemical characters and microscopic appearances of the normal and abnormal elements of the urine and their clinical indications. By John King, M. D. With twenty-seven useful tables and thirty-nine wood-cuts. Cincinnati: Wilstach, Baldwin & Co. Chicago: Jansen, McClurg & Co.

The above book lays before us, in alphabetical order, almost all that is of any importance which has been written relative to the physiological and pathological peculiarities of the urine. Much credit is due to Dr. King for getting together the very latest methods devised to render urinalysis practical and available to the busy practitioner. We observe among other devices he has given due force to the specific gravity method of determining the quantity of urea, devised by Dr. Geo. B. Fowler, of New York;

and has inserted in the supplement the very simple method of determining approximately the quantity of albumen, suggested by Dr. Wm. Roberts, of Manchester, England. It is certainly the most complete treatise on urinalysis extant, and we are convinced that those who examine judiciously the various works published, in order to make a selection will not hesitate long in making their choice.

There is, however, one thing which disappointed us. The derivation of words is entirely ignored. In a dictionary so well compiled we think we had a right to expect the derivation of such words as pycnometer, pyoturia and the like. Although the advisability of using classical words to express modern ideas may be called in question, yet if we use them we want to know as much as possible about them, so as to associate them intimately with their respective ideas.

The appendix also contains valuable information in useful tabular forms. It consists of 266 pages, and the binding is strong and durable, such as a dictionary requires. R. T.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF GEORGIA. Twenty-ninth Annual Session. Atlanta, April 17, 18, 19, 1878.

This volume presents, in a nicely finished, thoroughly revised form, the scientific labors of the Georgia State Medical Society, and contains some highly interesting essays. Dr. LE HARDY, at great length, discusses the history, causes, nature, pathology and treatment of yellow fever, from his personal experience during the epidemic of 1876, in Savannah. His observations fortified his belief in the *local* origin of yellow fever. His propositions are: 1. That yellow fever can *originate* here under certain conditions of earth and air. 2. That the sanitary condition of the low lands surrounding the city *is the most important factor* in the production of our yellow fever. 3. That *importation* is not necessary for its production, and, therefore, the strictest quarantine of ships, vessels or railroad trains will not prevent its occurrence in this place. Quarantine should be abolished and for it should be substituted *modern scientific disinfection*, which, in a few hours, will remove all causes of infection from any ship.

Dr. A. W. CALHOUN, Atlanta, gives a report of one hundred and thirty operations for strabismus. One hundred and sixteen operations were for convergent squint, and only fourteen involved the external rectus muscle, constituting divergent squint. As to the sex, the patients were pretty equally divided, viz., sixty-eight females and sixty-two males. But it is a singular fact, that among the whole number of cases only three have occurred amongst the negroes, although they have been collected in the midst of the densest portion of the black population of the South.

A new uterine tent is offered by Dr. W. T. Goldsmith, Atlanta. It is the pith of the dried cornstalk. "You take a joint of the dried stalk, strip it of its cuticle, and compress the pith, slowly and firmly, between the thumb and index finger. * * * By continued pressure you easily reduce it to four or five times less its original size. You can compress it to any intermediate size; or it may be used without compression, to carry medicaments to the interior of the uterus. Because of its ready compression to any desired bulk, you have the tent entirely under your control. Slight compression will give you moderate dilating power. Compress it as much as possible and you can get a dilating power equal to the sea-tangle or sponge. You may compress the pith first, and afterward, with a sharp knife, trim to the desired length and size; or you may first cut the pith to the size you wish it to dilate, and then compress it for easy introduction. * * The pith absorbs fluids readily, and when compressed, expands by such absorption to its original size." A few typical cases are reported, to illustrate the use and advantages of this new tent.

Dr. WILLIAM A. LOVE briefly alludes to the diagnostic value of the appearance of the hard and soft palate in intestinal diseases. "In all that class of diseases in which the general condition of the system demands the use of remedies known as *cholagogues* * * * experience has taught me that I risk nothing in saying that the muco-periosteal membrane in the roof of the mouth, will, by its yellow tinge, invariably indicate the necessity for their administration. *Per contra*, I may say, with equal confidence, that the absence of this yellowness indicates, with equal certainty, that such a class of remedies has been sufficiently used, or is not needed." The writer also alludes to the fact that in the exanthe-

matous fevers, the eruption appears in the roof of the mouth from twelve to twenty-four hours earlier than on the cutaneous surface.

F. C. H.

FOWNES' MANUAL OF CHEMISTRY, THEORETICAL AND PRACTICAL. Revised and corrected by Henry Watts, B. A., F. R. S., editor of the *Journal of the Chemical Society;* author of a Dictionary of Chemistry, etc. A new American edition, from the twelfth English edition. Edited by Robert Bridges, M. D., Professor of Chemistry in the Philadelphia College of Pharmacy. With one hundred and seventy-seven illustrations. Cloth, pp. 1027. Philadelphia: H. C. Lea. Chicago: Jansen, McClurg & Co.

This standard classical work on chemistry needs no recommendation to those who are acquainted with the literature of chemistry. It has, as the twelfth edition will testify, for years been a text book of great value, and the energy displayed by the editors in keeping it abreast of the times will enable it to retain the position in chemical literature which its merits have secured.

The changes introduced are mostly in the organic department, special attention being paid to the study of Isomerism, making the addition quite important.

R. T.

BOOKS AND PAMPHLETS RECEIVED.

Urological Dictionary, Containing an Explanation of Numerous Technical Terms; the Qualitative and Quantitative Methods Employed in Urinary Investigation: the Chemical Characters and Microscopical Appearances of the Normal and Abnormal Elements of the Urine and their Clinical Indications. By J. King, M. D., with twenty-seven useful tables and thirty-nine wood-cuts; pp. 226; leather. Cincinnati: Wilstach, Baldwin & Co.; 1878. Chicago: Jansen, McClurg & Co.

On the Therapeutical Forces: An Effort to Consider the Action of Medicine in the Light of the Modern Doctrine of the Conservation of Force By Thomas J. Mays, M. D., member of the Luzerne County Medical So-

ciety, etc., etc. Cloth; pp. 143. Price, $1.20. Philadelphia: Lindsay & Blackiston; 1878. Chicago: Jansen, McClurg & Co.

Anatomy, Descriptive and Surgical: By Henry Gray, F. R. S., etc., etc. With 522 engravings on wood. The drawings by H. V. Carter, M. D., and D. Westmacott. The Dissections jointly by the author and D. Carter. With an Introduction on General Anatomy and Development. By T. Holmes, M. A., Cantab., Surgeon to St. George's Hospital, etc., etc. A new American, from the eighth and enlarged English edition. To which is added Landmarks, Medical and Surgical, by Luther Holden, F. R. C. S., etc. Leather; pp. 983. Price, $7.50. Philadelphia: Lindsay & Blackiston; Chicago: Jansen, McClurg & Co.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland; 80th Annual Session, held at Baltimore, Md., April, 1878.

The Soft Palate; Its Value in Diagnosis as Compared with the Tongue in Derangements of the Liver, Malarial Diseases and Exanthematous Diseases. By William Abram Love, M. D., Professor of Physiology in the Atlantic Medical College, etc., etc. Reprint from the Transactions of the Medical Association of Georgia, 1878.

Medico-Legal Evidence, Relating to the Detection of Human Blood, Presenting the Alterations Characteristic of Malarial Fever, on the Clothing of a Man Accused of the Murder of Narcisse Avrieux, December 27 1876.

Cholocystotomy for the Removal of Gall Stones in Dropsy of the Gall Bladder. By J. Marion Sims, M. D. Reprint from *British Medical Journal*, June 8, 1878.

Report on the Health of Children in the Oneida Community. By T. R Noyes, M. D., Oneida, New York.

Minutes of the State Medical Society of Arkansas, at its Third Annual Session. Little Rock, Arkansas.

Post Nasal Catarrh. By W. Porter, M. D., St. Louis, Mo. Reprint from Illinois *Medical Recorder*, Vandalia, Ill.

Tubercular Laryngitis: By W. Porter, M. D., St. Louis, Mo. Reprinted from the Transactions of the Missouri State Medical Association, 1878.

Fibrous Tumors of the Uterus: By W. H. Byford, M. D., Professor of Obstetrics and Diseases of Women and Children in the Chicago Medical College. One of a Series of American Clinical Lectures, edited by E. C. Seguin, M. D. New York: G. P. Putnam & Sons, 182 Fifth av.

Second Annual Report of the State Board of Health of the State of Wisconsin, for the year ending December 31, 1877.

Transactions of the Iowa State Medical Society, 1877-8, Vol. III.

Summary.

Collaborators:
DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

PHYSIOLOGY.

EXPERIMENTAL INVESTIGATIONS ON THE VARIATIONS OF THE VOLUME OF THE CRANIUM, AND ON THE APPLICATION OF THE GRAPHIC METHOD TO SOLVE THE DIFFERENT ANTHROPOLOGICAL PROBLEMS.—M. Le Bon. (*La France Médicale*, July 17, 1878.)

M. B. presented to *L'Académie des Sciences* the following conclusions which are based on a considerable number of measurements, both of living subjects and from the specimens in the Museum of Anthropology, as well as from unpublished documents. The results are exhibited in graphic form at the Exposition. The conclusions are as follows:

1. The development of intelligence bears an intimate relation with the form, structure and volume of the brain. The volume is one of the most important of these factors. In measuring a series of skulls, taking a good average number to form the series, it invariably holds good that the most voluminous brain belongs, in the human species, to the races the most gifted intellectually; and in each race to the most intelligent individual.

2. In confining the attention, as is generally done, to the mean of all the skulls of each race and by comparing these means, there appears to be very little difference between one race and another. But if with the measurements arranged according

to their increasing volume, certain curved lines are drawn exhibiting how many subjects there are in a given race possessing a brain of given volume, it is readily seen that that which constitutes the superiority of one race over another is the fact that the superior race contains many more large skulls than the inferior race. In a hundred modern Parisian skulls there are about eleven subjects the volume of whose skulls would range between 1,700 and 1,900 cubic centimeters, whilst among the same number of negroes not one is found with a capacity equal to those indicated above.

The weight of 100 brains of modern Parisians of the masculine sex has shown that their weight varies from 1,000 to 1,700 grams. The cubic measure of an equal number of skulls has demonstrated that the measure of an individual skull varies from 1,300 to 1,900 cubic centimeters. These extremes approach each other by gradual progression.

4. The remarkable difference which has just been indicated in the weight of the brain and size of skull of different individuals of the same race, varies remarkably when we compare one race with another. The difference is greater in proportion as the race is more advanced in the scale of civilization. It has been established that the difference between the volume of the largest adult masculine skulls and the smaller skulls among the following races are :

Difference of size of the Gorrilla skull.....	148	C. C.
Difference of size of the Negro skull	204	"
Difference of size of the Ancient Egyptian	353	"
Difference of size of the Parisian of XVII century	472	"
Difference of size of the modern Parisian	593	"

The difference in size between the greatest and smallest skulls of modern Parisians is three times as great as the same difference among the negroes. The difference is greater among the modern Parisians than among their ancestors of 600 years ago.

5. The height (*taille*) has a certain amount of influence over the size of the brain, but the influence is very small. In grouping individuals of the same height (*taille*) and taking the mean weight of the brain of each group, it is perceived that between the mean weight of the brain of the group of individuals of the

greatest height and the mean weight of the brain of the individuals of the smallest height, the difference is scarcely 100 grams, whilst the difference often amounts to 300 grams among individuals of the same height.

6. Similar height being compared, the female has a brain much lighter than the male. On taking the mean weight of 17 brains of the masculine sex, the height being from 159 to 160 centimeters and comparing them with the brains of 17 of the female sex, the difference was found to be 172 grams in favor of the males.

7. The difference existing between the weight of the brain and consequently the volume of the skull in man and woman increases constantly in proportion as the race advances in the scale of civilization; so that looking at the mass of the brain and consequently the intelligence, the difference which was previously stated as existing is still increasing. For instance, the difference which exists now between the mean size of the skulls of the men of Paris and the women of Paris, is almost double that which exists between the skulls of the male and female inhabitants of Egypt.

8. Certain persons, having skulls measuring the same circumference, may present a difference of height of skull amounting to 200 C. C. in volume. That is easily comprehended when we remember the different factors, especially the height of skull, which must be taken into consideration in order to estimate the volume. But in measuring a whole series it is soon demonstrated that an increase of one centimeter in circumference of the skull corresponds to an increase of volume oscillating about 100 C. C.

9. The circumference of the skull, on which depends, as has just been seen, the volume of the brain, bears an intimate relation with the intelligence.

10. A comparative study of the various curves of the circumference of the skull, and of the curves of the head, and of the volume and weight of the brain, has shown the relation existing between these different values. A head, with a circumference of 57 centimeters, corresponds to a skull of 52 centimeters, and to a volume of 1,550 C. C. The probable weight of the brain in the skull will be 1,250 grams.

11. There is a constant inequality of development between the two halves of the skull which is sometimes more developed on the left, sometimes on the right side. Neither the race nor the intelligence seems to have any perceptible influence on this unequal development.

Practical Medicine.

Etiology of Tuberculosis.—Discussion at Fiftieth Congress of German Naturalists in Munich. Session of 21st September, 1877. (*Allgem. med. Centralzeitung*, Nos. 38–45, 1878.)

Prof. v. Buhl made some introductory remarks on the lymph-vessels of the pulmonary parenchyma. Siborsky had previously injected a solution of carmine into the lungs of a living rabbit, and found after death an injected network with stellate openings in the alveolar wall. A repetition of that experiment by Buhl's assistant, Dr. Schweninger, did not succeed. But a better mode of demonstrating the openings of the lymph-vessels consisted in filling a human lung (after death) with a colored fluid. On injecting a fluid containing cinnabar in suspension into the lungs of a living dog, and killing the dog at once by ligating the trachea, the cinnabar passes completely into the lymph-vessels and none remains in the alveoli.

Microscopical examination of such lungs shows conclusively that the lymph-vessels open into the alveoli. These openings are evidently dilated during inspiration, facilitating the entrance of any alveolar contents, solid or fluid, while the compression of these apertures during expiration prevents the expulsion of any particles.

In Dr. Buhl's institute, Dr. Lippl experimented on the direct inoculability of phthisis. As subjects he chose dogs, on account of their relative immunity from that disease. Drying and pulverizing some tuberculous sputa, he caused this dust to be inhaled by a dog through an opening in the trachea. This was repeated on three days; the animal died the twelfth day. The autopsy revealed numerous white miliary nodules in the lungs, on the pleura

and peritoneum, but they were not tuberculous, consisting simply of fat molecules and fat drops. But a decided miliary tuberculosis of the lungs was obtained by introducing into the lungs 30 to 50 C. C. of an emulsion of sputa with a 1 per cent. solution of salt. On repeating the inhalation two to four times and keeping the dogs alive for about two months, a success was obtained in every case.

Further experiments were reported by Dr. Tappeiner. He placed three healthy dogs into large, airy kennels. Taking a spoonful of fresh tuberculous sputa, he made an emulsion of it with 900 gr. of a 1 per cent. solution of Na Cl. This fluid was put into a steam atomizer in the kennels for one to two hours daily. The dogs remained apparently healthy, but on killing them after four weeks, a true disseminated miliary tuberculosis was found. Two other dogs receiving daily two spoonsful of the same sputa in their food, presented likewise a genuine miliary tuberculosis after six weeks, without having shown any symptoms during life. The innoculability through pulmonary and intestinal absorption was thus positively proven in animals noted for their immunity from spontaneous phthisis.

Dr. Schweninger, who had made the microscopical examination in the above cases, hereupon demonstrated the specimens, proving satisfactorily their tuberculous nature.

Speaking about the identity of human and animal tuberculosis, Prof. Bollinger criticised it as a mistake to employ rabbits and guinea-pigs for inoculation, since these amimals easily acquire tubercular affections from the most various (non-specific) causes.

On the other hand, having injected caseous masses from a tuberculous tongue of a cow into the peritoneal cavity of a goat, he found that animal presenting a genuine miliary tuberculosis of the peritoneum after the lapse of six weeks. Prof. B. further discussed the relation of phthisis to scrofula. By inoculating a goat in the peritoneum with some scrofulous gland-matter removed from the axilla of a man, an exquisite miliary tuberculosis of the peritoneum was obtained. Subsequent examination revealed an initial pulmonary infiltration in that human patient. On the other hand, the feeding with true tuberculous matter will

produce in some animals a scrofulous bowel affection, bearing a complete resemblance to the tabes meseraica of cattle.

Prof. Ponfick attempted to follow the mode of propagation of the tubercular virus, by examining the thoracic duct in all autopsies. In all cases of a strictly localized tuberculosis, the duct was found intact. But in the majority of instances of disseminated tubercles there was found a multiple eruption of miliary or aggregated tubercular nodules in the internal coat of the thoracic duct. This appearance is a manifestation of the passage of an impure irritating lymph; the impurities, however, we know only by their effects.

Omitting the purely critical part of Prof. Kleb's remarks, we will mention only his new results and views. In order to determine whether the contagious agent was the cells, of which the tubercle consists, or some other multiplying virus, he made some experiments in cultivating and isolating the virus. Placing some tuberculous matter in pure albumen of the egg, protected from dust, he found the latter soon cloudy from the presence of numerous exceedingly small molecules and short rods. On placing a drop of this mixture into successive portions of fresh albumen, the original substance of the tubercle was soon virtually removed by the increasing dilution; the molecules, however, continued to multiply.

Albumen thus inoculated, can produce true tubercles when introduced into the body of a healthy animal. On the other hand these fine molecules, if really the bearer of the virus, ought to be found in all tubercles, and Klebs did actually succeed in finding them. In all tubercles he examined he observed an immense number of molecules of barely visible dimensions, measuring 0.2, 0.5 micromillimeters. They were in constant movement, which movement was proven to be of vital origin by its cessation in high temperatures. The molecules were seen most abundantly in cases of acute disease in parts in which discrete tubercles were not yet found.

In the mesentery of a cat inoculated with albumen containing tubercular virus, the tubercles were found distributed along the course of the vessels. They consisted of proliferated endothelial cells, and contained but few white corpuscles. Emigration of

leucocytes is only an accidental occurrence in the development of tubercle. Between the endothelial cells the molecules previously described were found. But in and around the walls of vessels—at spots where no tubercles existed as yet, these same molecules were found likewise in accumulations. Prof. Klebs does not hesitate to call these corpuscles the bearers of the tuberclar virus, and to consider such accumulations along the vessels as the starting point of tubercles.

COLLODION IN SEA-SICKESS. Dr. Laederich. (*L'Année Médicale*, June, 1878, p. 101.)

The author has seen many cases in which sea-sickness has been prevented by the use of collodion as described below. He gives two striking cases in which the patients, who had previously suffered from sea-sickness every time they had crossed the ocean, were entirely prevented from it by the collodion.

The author's mode of using the collodion is as follows:

Before embarking, the traveler applies successively three coats of ricinated collodion with a brush over the epigastric region, not extending beyond the anatomical limits, which he indicates thus to persons consulting him: a horizontal line just above the umbilicus, to the right and left two vertical lines situated 5 centimeters outside of verticals, let fall from the nipples; finally, above, a line parallel with the costal borders, and 3 or 4 centimeters above these. When the journey is to be of several days' duration, he recommends the traveler to take a supply of collodion with him to repair the cracks sometimes produced in the coating.

The author has no proofs of this method being curative of cases already begun, but believes it would be so. He does not pretend to explain the action of collodion in these cases. He only knows that it is a powerful anti-emetic when thus applied, and has employed it in other cases, such as traumatic peritonitis, in which frequent and painful vomiting has been either entirely arrested or very much relieved, and the patients very much comforted. For this reason, he thinks it might be curative of sea-sickness as well as preventive.

BRYONIA AND DRASERA IN THE TREATMENT OF WHOOPING-COUGH.—Dr. Louvet-Lamare. (*L'Année Médicale*, June, 1878, p. 105.)

The author gives in the first or catarrhal stage of the disease a daily dose of 1 gram of the tincture of bryonia to a child of seven years. The medicine does not abridge this stage, but it very sensibly diminishes the tracheo-bronchitis, which is then the only morbid manifestation; moreover, being bitter, it stimulates the appetite, and does not occasion nausea.

When the characteristic cough occurs, he gives the tincture of drasera in daily doses of 1 gram for a child of seven years, and the frequence and violence of the coughing fits at once diminish. The value of this treatment has been proved in a large number of cases, and also in the fits of coughing, in certain cases of bronchitis, and even in phthisis, though not so marked as in pertussis. But little success has been obtained from it in coughs caused by laryngitis and laryngo-trachitis.

The dose may be increased by 5 drops or more every second day without danger, as it is not poisonous. The cough diminishes still more, but usually lasts for two or three weeks before convalescence. If, on the contrary it be given to a child who has had the cough for three weeks or so, one may expect to *cure the worst cases in a few days.* From a large number of cases thus treated, the author concludes that the disease may be shortened to at least one half the time required by change of air, which is often impossible.

TAPPING A VOMICA IN PHTHISIS.—Williams.—(*Br. Med. Jour.*, July 20, 1878.)

A patient aged twenty-eight, had had consumptive disease for six years. A large cavity with pleuritic adhesions had formed at the base of the left lung, besides others in other parts. The cough was harrassing, the expectoration very profuse (nearly a litre every 24 hours), and very offensive. Microscopical examination showed that lung degeneration was rapidly advancing. At the writer's request, Mr. Erichsen introduced a large-sized trocar and cannula between the seventh and eighth ribs, and withdrew a litre of fœtid pus; the operation being somewhat difficult on ac-

count of the toughness of the fibrotic lung. Relief was immediate, all fœtor ceased, both pulse and temperature fell, and the expectoration was reduced to 60-100 C.C. Limited pneumothorax and cutaneous emphysema followed, the latter soon subsiding. Even at the expiration of a month, the discharge was slight. The cavity had several times been washed out with antiseptic fluids.

The operation had previously been done in this country by Dr. Pepper, in England by Dr. Ramadge, in Germany by Dr. Mosler, and by others. The practice is only suited to exceptional cases, such as those of fœtid expectoration. It has been recommended to accomplish the same purpose by catheterisation of the air-passages, by large thoracentesis, by aspiration, by caustic and by galvano-caustic, the latter preferred by Koch of Berlin.

SURGERY.

SURGICAL VENOUS THROMBOSIS. M. Azam. (*Le Progrès Médical*, July 13, 1878, p. 543.)

The author read a paper to the *Société de Chirurgie* of which the following are the conclusions:

1st. Venous thrombosis of surgical origin is possible after fractures, contusions, phlebitis, varices, chronic inflammations in the neighborhood of large veins, and by the pressure upon the veins of rapidly developed tumors.

2nd. Venous thrombosis suspected by œdema of the parts situated below, is confirmed by direct exploration by the fingers along the course of the efferent veins.

3rd. The escape of migratory clots may be provoked by the movements of the patient, by extended exploration of the thrombotic veins, by massage of the limbs affected, or by the sudden suppression of the compression of a thrombotic vein.

4th. The accidents which are provoked by migratory clots are of various orders; according to their size they are, malaise, pleurisies with limited effusion, partial pneumonias, spitting of blood, syncopies, asphyxia and sudden death.

5th. The surgeon may prevent the formation of venous clots by avoiding as much as possible compression of all the large veins, and by having the greatest regard for their internal membranes, in hastening the cure of neighboring, chronic or deep inflammations.

6th. If the thrombosis is confirmed, he should avoid the separation of the clots by opposing as far as possible local and general movements, and in emptying by successive punctures the collections of liquids in the vicinity of thrombotic veins.

M. Verneuil asked M. Azam to add sudden pyemia to his list of disasters from nervous thrombosis. He has seen some striking examples.

M. Tillaux remarked that certain emboli, the result of venous thrombosis, are arrested in the right heart, causing death by syncope. He has seen in a case of thrombosis of the femoral vein, sudden death caused by a clot lodged in the columns of the right ventricle.

COMPLETE RESECTION OF THE WRIST: CONSERVATION OF THE MOVEMENTS OF THE FINGERS AND HAND. M. Reverdin. (*Le Progrès Médical*, July 13, 1878, p. 543.)

The author performed the operation upon a man of 41 years, in whom the member was compromised by a suppuratlve arthritis consecutive to a contused wound of the thumb. The operation was done after Lister's method, April 12th, 1877. M. Reverdin attacked the articulation by a simple dorsal incision in the neighborhood of the external border of the wrist; the necrosed bones of the wrist, the inferior extremities of the radius and ulna were extracted without much difficulty. The specimens were shown to the society. But one accident occurred—secondary hæmorrhage of the radial, after eight days, and M. Reverdin was obliged to tie both ends of the artery. Except this complication, the course was very simple.

To-day the patient has recovered the freedom of motion in the wrist; there is no loss of force in the muscles of the forearm. The three last fingers only present an incomplete mobility. However, the patient is able to use his hand for writing, and for some small carpentry work.

M. Reverdin, however, is not perfectly satisfied with the operative procedure. In order not to cut the extensor tendons, he had to draw them away forcibly. Perhaps it would be more simple, he adds, to cut one or more extensor tendons, because they remain too long after the operation, the regeneration of the bones always being incomplete.

CHOLECYSTOTOMY.—Sims.—(*Br. Med. Jour.*, June 8, 1878.) A long account of a very interesting case which lead to the above operation, the first of its kind, is given by Dr. Marion Sims. It occurred in the person of an American lady residing in Paris. Without giving the details we will only say that it was a case of obstruction of the duct with dropsy of the gall-bladder from gall stone. Considerable fluid had been removed by aspiration and there was no doubt as to the diagnosis of the cystic trouble. She had been seen by the most celebrated French physicians, who were able to offer no relief. The symptoms were most acute and death was imminent when Dr. Sims proposed and executed the following plan of operation: An incision, three inches long, parallel with the linea alba, and three inches to the right of the umbilicus, was made over the most prominent part of the tumor and down to the peritoneum. The whole operation was made under the antiseptic spray, and with all the usual precautions. After hæmorrhage had ceased and the peritoneum been opened, a trocar was thrust into the tumor caused by the distended gall-bladder and nearly 1,000 C. C. of dark brown fluid withdrawn. When the cyst was emptied it was hooked up with a tenaculum to the edge of the incision and drawn out with the fingers. It was then incised with scissors for about two inches, and thoroughly cleansed out with sponge porbangs; along with more viscid fluid, several gall stones were thus removed. Having thus swabbed out the gall-bladder, its open border was secured to the upper angle of the abdominal incision so as to secure a fistulous outlet. A projecting portion was amputated. After waiting for all hæmorrhage to cease, the abdominal wound was closed.

The patient's condition remained satisfactory for some days, but on the ninth day she sank, and died vomiting blood, and with hæmorrhage from mouth and nasal cavity.

Post-mortem inspection showed the abdominal wound everywhere healed, and no evidences of peritonitis. The gall-bladder was greatly thickened, and contained sixteen sacculated gall-stones. Death had been caused by hæmorrhage from the mouth and stomach, which had resisted all treatment and was probably due to changes in the blood.

So much for the conception and execution of a new operation by an American surgeon, to which he has given the most appropriate name as above. With aspiration as a means of diagnosis and antisepticism as a means of safety, there seems no reason why it should not take its place with ovariotomy and other similar operations as a *dernier resort*, and at the same time as a most positive relief in cases where it is appropriate.

SPONTANEOUS DISINTEGRATION OF VESICAL CALCULI.—At a meeting of the London Pathological Society (*British Medical Journal, June* 8, 1878), Dr. Ord exhibited several specimens illustrating the spontaneous disintegration of calculi within the bladder. All were fragments of fusiform calculi, which had been disrupted and then coated with urate of ammonia. They were evidently originally deposited from an acid urine; the urine had become more alkaline, and the outer layers were of less acid material. Owing to this change of environment, the nuclei had swollen and acted as a bursting charge. This accounted for nuclei being so rarely found in such cases.

CYSTINE CALCULI.—Southam.—(*Br. Med. Jour.*, July 13, 1878.)

Out of a total number of fifty-five cases of vesical calculi, S. reports four cases where the stone was composed almost entirely of cystine—a very large proportion. Three of these cases came from the same locality, while two of them occurred in females. In one of them the condition of cystinuria persisted for several years. Two of the calculi were removed by lithotrity, one by lithotomy, and one by dilatation of the urethra (female).

GYNÆCOLOGY.

DIAGNOSIS OF MALIGNANT OVARIAN TUMORS AND MALIGNANT PERITONITIS.—Foulis.—(*Br. Med. Jour.*, July 20, 1878.)

In one of his lectures on the above subject, Prof. Foulis, of Edinburgh, sums up as follows:

Malignant ovarian tumors are generally surrounded by ascitic fluid; this should always be carefully examined with the microscope. If in it we find a large number of sprouting, vigorously-growing cells, some of which masses may be seen by the naked eye, we may safely conclude that the peritoneum is the seat of a most serious disease, and that there are numerous adhesions between the tumor and neighboring parts, which will prevent its complete removal by ovariotomy. If these masses be found in bloody ascitic fluid, we may conclude that there are vascular, villous growths on the peritoneum; and if, in addition, the glands in the groin or abdominal parietes are enlarged, the tumor and peritoneal growths are certainly carcinomatous.

As an additional means of diagnosis the tumor itself may be punctured, under antiseptic precautions, with an aspirator needle, and a minute portion or some of its contents be withdrawn. The finding of sprouting masses of epithelium in ovarian cysts is not of much value, as such tumors may be often removed; but if they be found in the cysts of a tumor and in the ascitic fluid also, it is almost certain that serious adhesions exist between the tumor and adjacent parts, and that there are nodular growths on the peritoneum.

PATHOLOGY OF MEMBRANOUS DYSMENORRHŒA.—Cory.—(*Obstetrical Journal*, June, 1878.)

Dr. Cory related to the London Obstetrical Society the case of a patient who menstruated normally at fifteen, but never passed any membrane till after her marriage, at the age of thirty. Within two years thereafter, she had three miscarriages early in pregnancy. She almost invariably passed membranes with each subsequent period, except when she happened to have been apart from her husband. One interval of nine months without marital

approach was passed without the distressing features detailed above.

He thought the case favored the view that *her* menstrual epochs were due to the abortion of an impregnated ovum, together with its nidus, mucous membrane of the uterus—the decidua.

In discussion of the case following its report, the opinions were expressed that the term membranous dysmenorrhœa was inappropriate for such a case; that the ovum belonged to the period previous to the one during which it was expelled, otherwise no decidua could have formed; that ovulation was at best an irregular function, and that hypernidation might be produced by the uterine hyperæmia set up by marital life; that spermatozoa may live for some days, and impregnation take place after a menstrual period though connection has occurred before it.

Therapeutics.

An Additional Development of External Metallotherapy.—Dr. R. Vigouroux.—(*Le Progrès Médical.*)

A reference has been made in the Journal to the work being done by Drs. Charcot, Vigouroux and Burg, by the application of metallic and other discs to different places in the human body in an abnormal condition arising from the vaguely defined affection known as hysteria. The result of this work is the establishment of the fact that certain hyperæsthesic and anæsthesic areas become greatly modified on the application of these discs—the proper disc, either of gold, silver, copper, zinc, iron, etc., being ascertained by actual experiment. The modification, in some cases, having resulted in the cure of some hysterical patients who had suffered for years without relief. The difficulty that has hitherto been experienced, has been the fugitiveness of the relief. Dr. Vigouroux has discovered that by seizing the moment when the relief is experienced, and placing upon the already applied disc another disc, from the application of which the patient previously received no benefit, the effect becomes if not permanent,

greatly prolonged while the two are applied. Moreover, the same effect follows when the second or neuter disc is applied merely in the immediate neighborhood of the active disc. Before we cite the two cases presented by Dr. V., it is necessary to state that the same effect follows when the modification of the abnormal condition is obtained by galvanic or statical electricity.

Examples: A patient affected with hemianæsthesia of the right side, is placed on an insulated stool. Under the influence of a simple electric bath the hemianæsthesia and achromatopsia (color-blindness) passes to the left side, then disappears. At that moment Dr. V. fixes upon the right arm of the patient (sensible to tin) a disc of brass about the size of a button. The next day the anæsthesia and color-blindness return, but on the left side.

With another patient affected with total anæsthesia, the sensitiveness being restored with the same means, usually remains only a few minutes after the operation, but a plate of brass—the patient is sensitive to zinc—being placed upon both arms, the sensitiveness remains the whole day, and the patient is advised of the return of the anæsthesia by a special sensation of fluttering (*une sensation d' abattement.*)

Another patient, with the application of a little disc of gold-plated copper—she was sensitive to gold—retained her sensitiveness for eight days, but the anæsthesia returned as soon as the disc was removed. A similar experiment with the same result was repeated sometime afterwards.

Dr. V. promises to furnish the details shortly. We shall look forward to the fulfillment of the promise with great interest.

ACCORDING to *Harper's Weekly*, the members of the New York Medical Club were invited to an entertainment, a few years ago, by Dr. H. D. Paine, of that city, in the following terms:

"SCIENS, SOCIALITE, SOBRIETE."

DOCTORES,—Ducum nex mundi nitu Panes; tritucum at ait. Expecto meta fumen tu te & eta beta pi. Super attento, uno. Dux, hamor clam pati, sum parates, homine, ices, jam, etc. Sideror hoc. Anser.

"FESTO REASONAN FLOAS SOLE."

Items.

RESOLUTIONS OF RESPECT.—At a special meeting of the Rockford Medical Association held Wednesday, July 31, the following resolutions were adopted:

WHEREAS, death has removed, after a painful and protracted sickness, our worthy associate and co-worker, A. L. McArthur, M. D. and,

WHEREAS, The members of the Rockford Medical Association desire to express their esteem and regard for his memory, therefore,

Resolved, That we have received the intelligence of his death with heartfelt sorrow, and with a deep sense of the loss sustained to the profession.

Resolved, That we will cherish his memory with the respect due him as a worthy and active member of the medical fraternity, and also record our admiration of the many good qualities he possessed.

Resolved, That we extend our deepest and kindest sympathies to the family, and that these resolutions be forwarded to them as an expression of regard for our deceased professional brother.

Resolved, That we will attend the funeral as a society, and that these resolutions be published in the city and Chicago press, and also in the CHICAGO MEDICAL JOURNAL AND EXAMINER.

A. E. GOODWIN, President.
H. W. TEBBETTS, Secretary.

THE following is the programme of the second annual meeting of the American Dermatological Association, held at the Grand Union Hotel, Saratoga Springs, New York, August 27th, 28th and 29th, 1878. Papers: Introductory remarks, by the presi-

dent, Dr. J. C. White, of Boston; on the pigmentary syphiloderm, by Dr. I. E. Atkinson, of Baltimore; on a new method of permanently removing superfluous hair, by Dr. L. D. Bulkley, of New York; a case of the so-called xeroderma of Hebra, by Dr. L. A. Duhring, of Philadelphia; on the proper use of the term acne, by Dr. G. H. Fox, of New York; a case of scleroderma, by Dr. F. P. Foster, of New York; case of inflammatory fungoid neoplasm, by Dr. L. A. Duhring, of Philadelphia; treatment of hirsuties, by Dr. W. A. Hardaway, of St. Louis, Mo.; epithelium and its performances, by Dr. C. Heitzmann, of New York; idiopathic cutaneous atrophy, by Dr. J. N. Hyde, of Chicago; case of gangrænopsis, by Dr. H. G. Piffard, of New York; the use of linseed and oil as therapeutic agents in diseases of the skin, by Dr. S. Sherwell, of Brooklyn, New York; a further contribution to the study of the xeroderma of Hebra, by Dr. R. W. Taylor, of New York; a case of ulcerative scrofuloderm, by Dr. A. VanHarlingen, of Philadelphia; a case of recurrent cutaneous hæmorrhage with urticarial and bullous efflorrescence, by Dr. J. C. White, of Boston.

The *American Association for the Cure of Inebriates*, will hold its tenth annual meeting at Boston, Mass., commencing Tuesday, September 10th, 1878, at 10 A. M., in "Union Hall." A very important meeting is anticipated.

Poisoned by Kid Gloves!—A merchant recently bought a pair of navy-blue kid gloves in Hamburg. After his arrival in Berlin, he put on the gloves and made several visits. Soon after he felt sick and languid; and a peculiar eruption appeared on the dorsal surfaces of his hands. While searching for the cause of his strange ailing which greatly puzzled his physician, the patient thought of the new gloves and sent them to an experienced chemist for examination. The chemical analysis showed a considerable amount of arsenic in the gloves.—(*Allg. Med. Centralz*).

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Sept. 2 and 16.
West Chicago Medical Society—Mondays, Sept. 9 and 23.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 to 3 p. m., Ophthalmological, by Prof. Holmes; 3 to 4 p. m., Otological, by Prof. Jones.
Mercy Hospital—2 to 3 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Dr. Hyde. 3 p. m., Medical, by Dr. Bridge.

TUESDAY.

Mercy Hospital—2 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Mercy Hospital—2 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—4 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Mercy Hospital—2 p. m., Medical, by Prof. Davis.
Rush Medical College—1:30 p. m., Neurological, by Prof. Lyman.
Eye and Ear Infirmary—2 to 3 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Profs. Andrews and Isham; 3 p. m., Diseases of the Chest, by Prof. Johnson.

Special Clinics daily, from 2 to 4 p. m., at the South Side Dispensary, and at the Central Free Dispensary.